WORK SAFE BC
WORKING TO MAKE A DIFFERENCE

Electronic Audiogram Program User Manual
Part 1 of 3: Introduction & Getting Started

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Preface

This user manual is split into three word documents so they can be sent through email.

Part 1: **(This volume) Introduction & Getting Started:**
An overview of how the Hearing test data is collected; how to enter hearing tests in the simpler *Form Mode*; generate audiogram data files and send them securely to WorkSafeBC though our portal.

Part 2: Data Entry Mode:
Walks you through entering hearing tests in the traditional *Data Entry Mode*.

Part 3: Instructions on the maintenance and update of this audiogram program, plus the appendix with technical instructions related to the audiogram program.

Supported is the audiogram program running in Microsoft's Excel 2003, Excel 2007, and Excel 2010.
This manual shows Excel 2007 examples.

Electronic Audiogram Program Overview

The Electronic Audiogram Program (EAP) is a "program" embedded in a Microsoft Excel workbook.

The *EAP* supplements and replaces the paper audiogram form once used (a simple paper form is also provided for those that need to capture a hearing test away from the computer, then bring it back to the office for entry).

This "highly detailed" manual is designed to assist audio labs that have little or no experience in using computers, with screenshots for every step in the instructions and likely errors. This manual is updated as new features are added.

Getting Started Quickly

The EAP is *not* a difficult program to use – don't judge it by these 3 volumes – we just needed to explain carefully how it works to support the needs of the computer and Excel novice, as well as the sophisticated expert.

We suggest reading just from here to page 13: "*Entering a Hearing Test in Form Mode*", then trying out the EAP to enter just a hearing test form or two in what we call "Form Mode", peeking at the manual only when needed, and only generating that form or two. Then, signing on to www.worksafebc.com to upload the entered hearing test(s). This should give you a good introduction to the process. [1]

Use the rest of the manual as a handy (if obsessively detailed) reference guide.

[1] For this last step, you will need to consult the manual located here:
http://www2.worksafebc.com/pdfs/hearing/IAS_User_Manual.pdf

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Process Overview for recording and saving tests in the EAP and submitting them through the IAS portal

Step 1 - One can enter data into the Electronic Audiogram Program (EAP) in two different ways, the slower but more understandable *Form Mode*, or the quicker, but less obvious *Data Entry Mode*. If you are new to this, use the Form mode. This manual will help with this step.

Step 2 - Once you are through collecting data and entering it, you will first export (save) the data as a *data* file, by clicking on the red Generate Button.

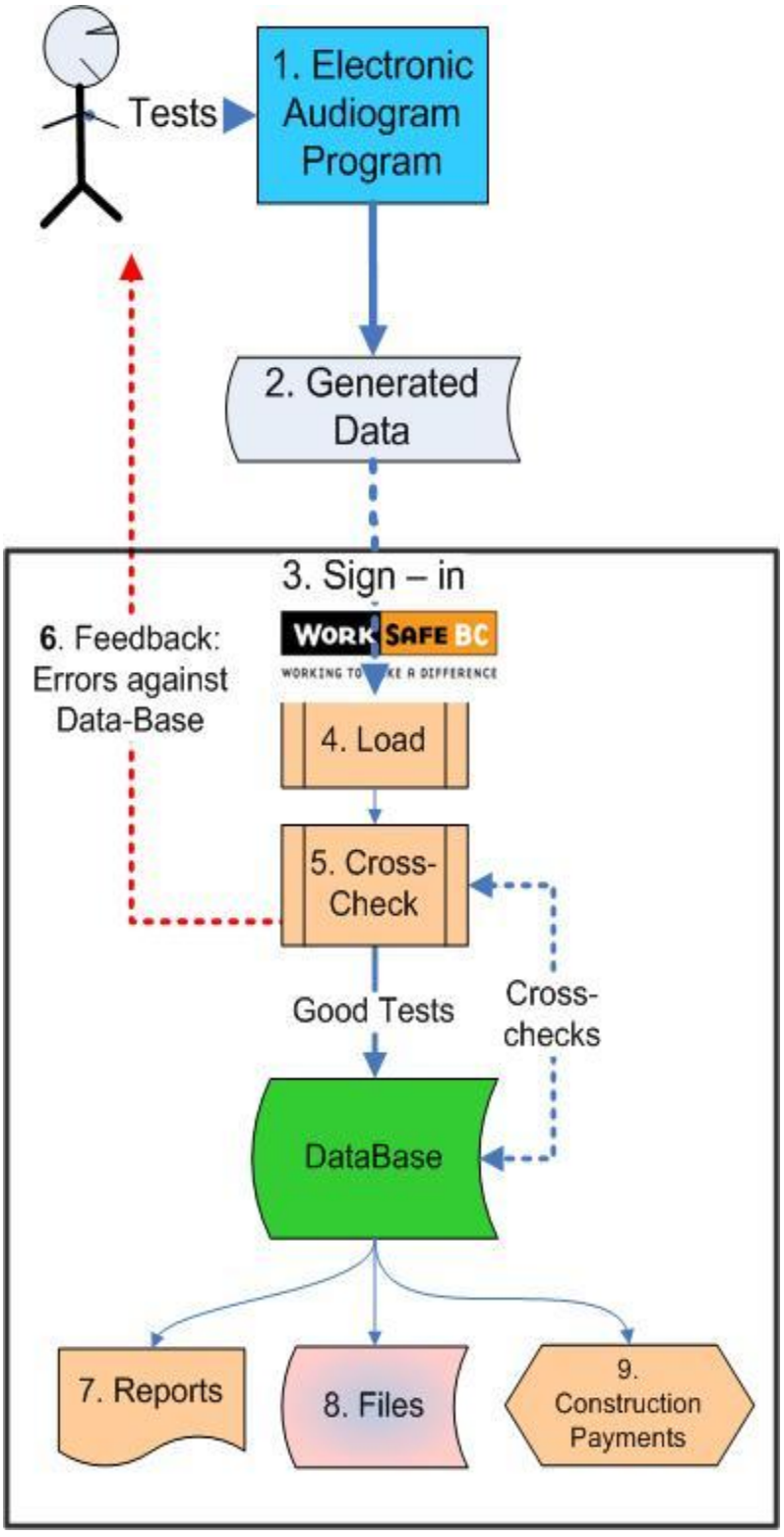
Step3/4: Then sign onto the WorkSafeBC website: http://www.worksafebc.com (Employers / Small Business section) and upload the data file to us. The IAS user manuals will help with these steps.

Step 5 – WorkSafeBC's system will then load it and analyze it.

If the tests loaded in the file are completely correct, you are done. If there are errors, you are prompted to fix the errors through the website. Details of how to do this are in the Industrial Audiometrics User Manual
see: IAS_User_Manual

Step 7 - You may optionally create useful reports with the data.

Step 9 – you will get paid for any Construction tests sent in.



Starting and using the Electronic Audiogram Program (EAP)

When you first open the EAP, you will always perform the following steps:

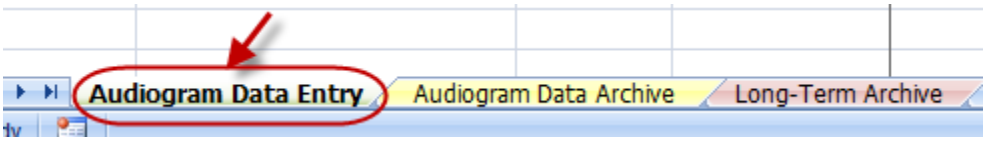
1. Enable *macros* to run in Excel: give the Audiogram Program's macros (these are small programs) permission to run. There will be a message bar with the message:

   Security Warning some active content has been disabled [Options]

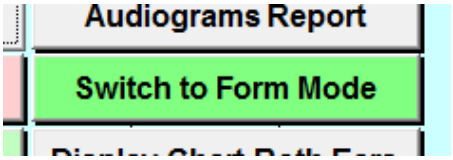
   Click on the [Options] and then click on "Enable this content"

2. A window will then pop up asking for your company number. Verify your *Industrial Audiometric Business* (IAB) *Number* is correct, and enter it.

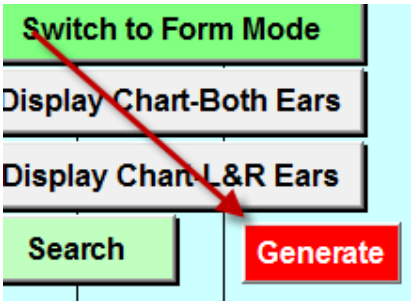
3. Select the right "spreadsheet" (tab): go to the "*Audiogram Data Entry*" tab, it is light green:



4. If you are new to this, click on the green "*Forms Mode*" button, and fill out the forms as instructed. ➔
   When finished filling out the form, click the "Switch to Data Entry mode" button.

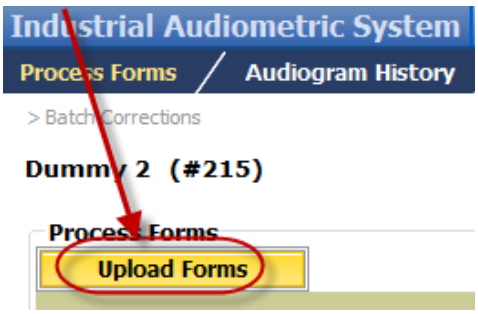


5. ***Generate*** the file(s) to send to WorkSafeBC, using the red button.
   ➔



6. Then, connect to WorkSafeBC's website and upload the file securely. [2]

7. WorkSafeBC will immediately analyze the file and let you know what, if anything, needs correcting. You can correct errors interactively. Please review the IAS User manual for more information.



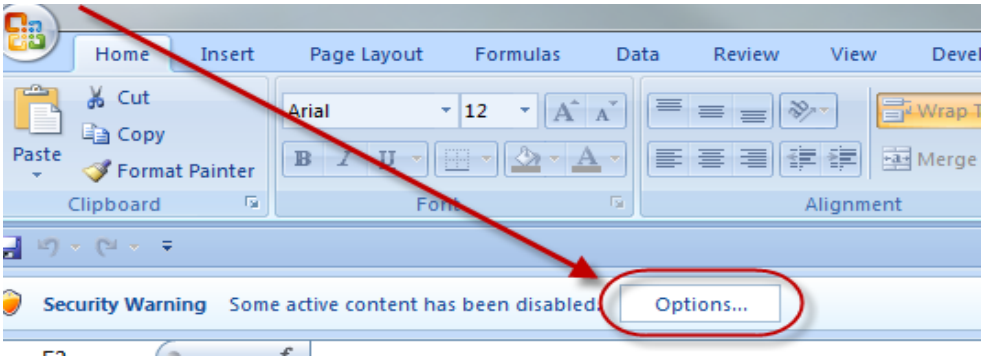
[2] See the ***Industrial Audiometric System User Manual*** and the ***Industrial Audiometric System Administrator*** manual, available in www2.worksafebc.com/Topics/HearingLossPrevention/Home.asp .

Starting the EAP program

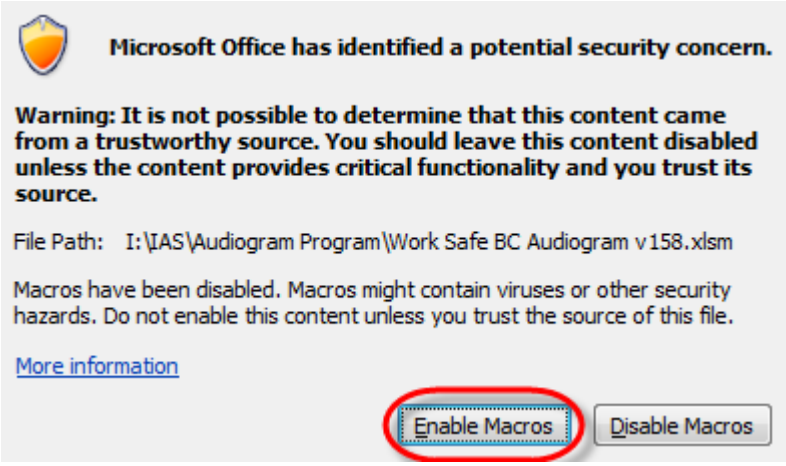
To start the program, you just need to *open* it, by *double-clicking* on it.

You should then see one of these following *Security Warning* messages pop up. The message varies per the version of Excel used.

Security Warning
You should see the 'Options' button at the top of the tab as seen in this screen shot.



- ⇨ Click the 'Options' button, you will see the next window pop up.
- ⇨ Sometimes, instead of the 'Option' button, you will see the following window popup. If you see the following window, click the 'Enable Macros' button to enable the audiogram program.
- ⇨ Then Select the 'Enable this content' option and click the 'OK' button to enable the audiogram program.


Microsoft Office has identified a potential security concern.
Warning: It is not possible to determine that this content came from a trustworthy source. You should leave this content disabled unless the content provides critical functionality and you trust its source.
File Path: I:\IAS\Audiogram Program\Work Safe BC Audiogram v158.xlsm
Macros have been disabled. Macros might contain viruses or other security hazards. Do not enable this content unless you trust the source of this file.
More information
Enable Macros
Disable Macros

Continued on next page.

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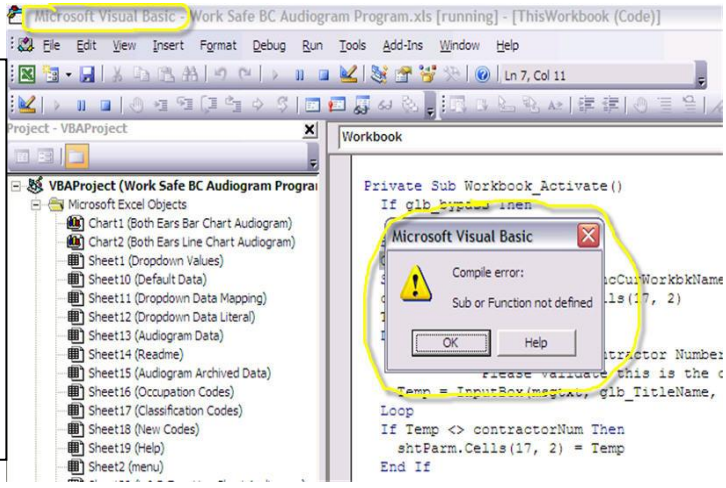
* When you first start the audiogram program, if the Microsoft Visual Basic' window is opened and a message box similar to this "Compile error ... sub or function not defined" is displayed, then your Microsoft Excel program is not setup to run the audiogram program yet.

If you see this message, see Appendix D in Part 3 of the user manual for detailed instructions.



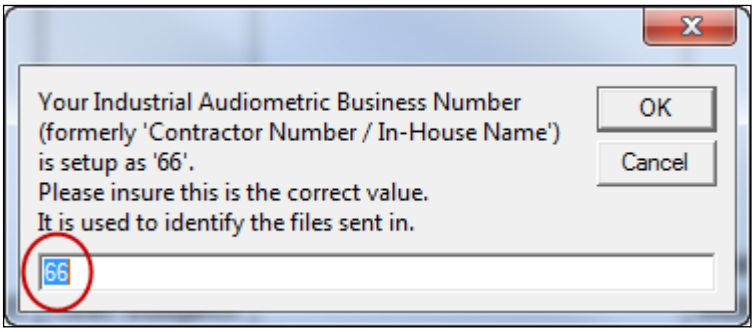
If you don't see a message box, refer to Appendix D in Part 3 of the user manual for instructions on how to setup your Excel program to run the audiogram program.

Establishing Who You Are

The EAP needs to know who you are in a business sense.

The Industrial Audiometric Business number

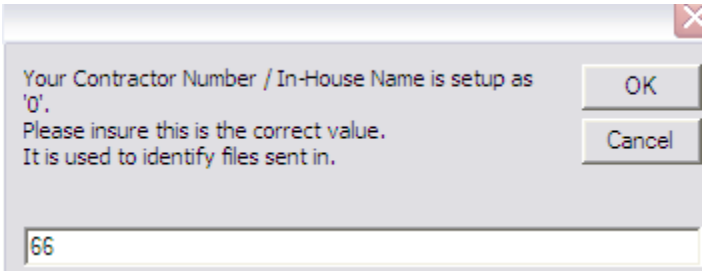
Next you will see this message box. It will be set to "0" and you will be required to enter your Industrial Audiometric Business number (previously this has been referred to as a "contractor number"), and click the 'OK' button to continue.
This manual uses contractor number 66 in all the examples.


Your Industrial Audiometric Business Number
(formerly 'Contractor Number / In-House Name')
is setup as '66'.
Please insure this is the correct value.
It is used to identify the files sent in.
OK
Cancel
66

Note: the IAB number must be correct for you to upload your data to us.

Save the spreadsheet, by pressing the **Cntl-S** (implies *Save File*) key combination, or - clicking on the blue save icon in the top left corner and ➔ selecting the "Save" command.

When you next open the audiogram program you will see the following message box has the previously entered IAB number. If it is set as you wish, click on "*OK*".


Your Contractor Number / In-House Name is setup as '0'.
Please insure this is the correct value.
It is used to identify files sent in.
OK
Cancel
66

Tip: If you don't see this message box after you open the audiogram program, it means you have *not* enabled macros. Close the audiogram program and reopen it again, this time enabling content / macros.

Navigating Different Areas of the Audiogram Program

Before we learn how to use the audiogram program, let's get to know the different areas of the Microsoft Excel window that contains the audiogram program.

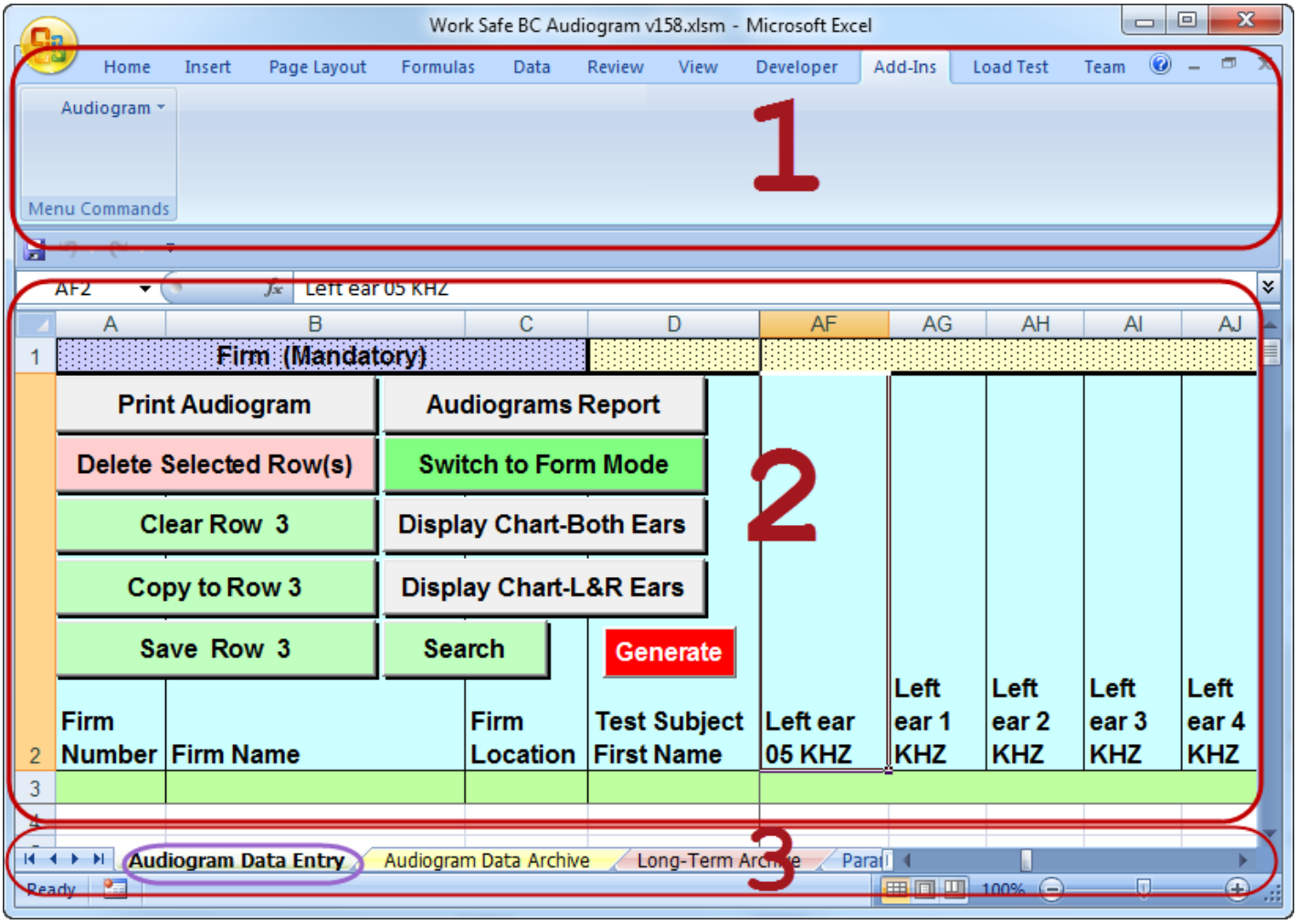
There are three main areas in the Microsoft Excel window that contains the audiogram program.

[1] At the top of the Microsoft Excel window is the **Excel menu items**, these menu items contain all the functions provided by Excel. If you are familiar with Excel, then these functions are available to you.

There are a few *additional* functions provided by the audiogram program, accessible via the **'Add-Ins'** menu tab.

[2] In the middle of the Microsoft Excel window is the **worksheet (tab) work area**, each tab contains different information used in the audiogram program. The main data tabs are 'Audiogram Data Entry', 'Audiogram Data Archive' and 'Long-Term Data'. The 'Audiogram Data Entry' tab is the main tab where you enter Hearing Tests.

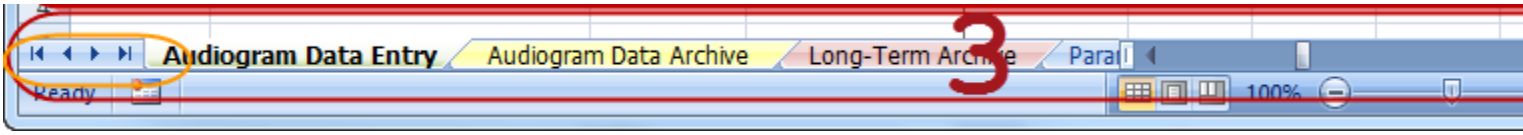
Other tables are 'Parameters' , 'New Codes', 'Classification Codes', 'Occupation Codes', 'Firms', 'Test Subjects'.



[3] At the bottom of the Microsoft Excel window is where you can find **the names of all the worksheets**. You can move to worksheets (tabs) that are not displayed at the bottom by moving the list of tab names to the left or right. You can display the content of a tab by clicking on the name of that tab at the bottom.

Navigating to a worksheet (tab)

At the bottom of the Excel window you will see the names of different worksheets which are also referred to as tabs (tab and worksheet is the same thing) in this manual. You can display a tab by clicking on the tab name. Clicking on the arrows at the left hand side will move the tab names at the bottom to the left or right.



- moves to the **left-most tab**.

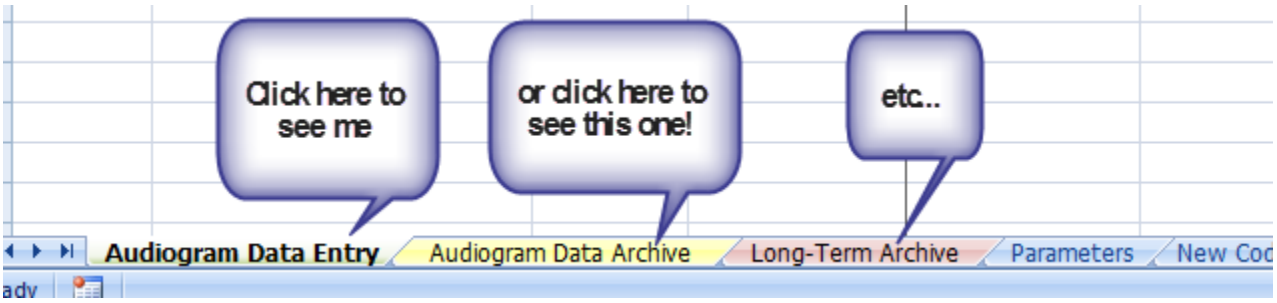
- moves **one tab to the left**.

- moves **one tab to the right**.

- moves to the **right-most tab.**

These arrows only move the tab names at the bottom and do not affect which tab is being displayed.

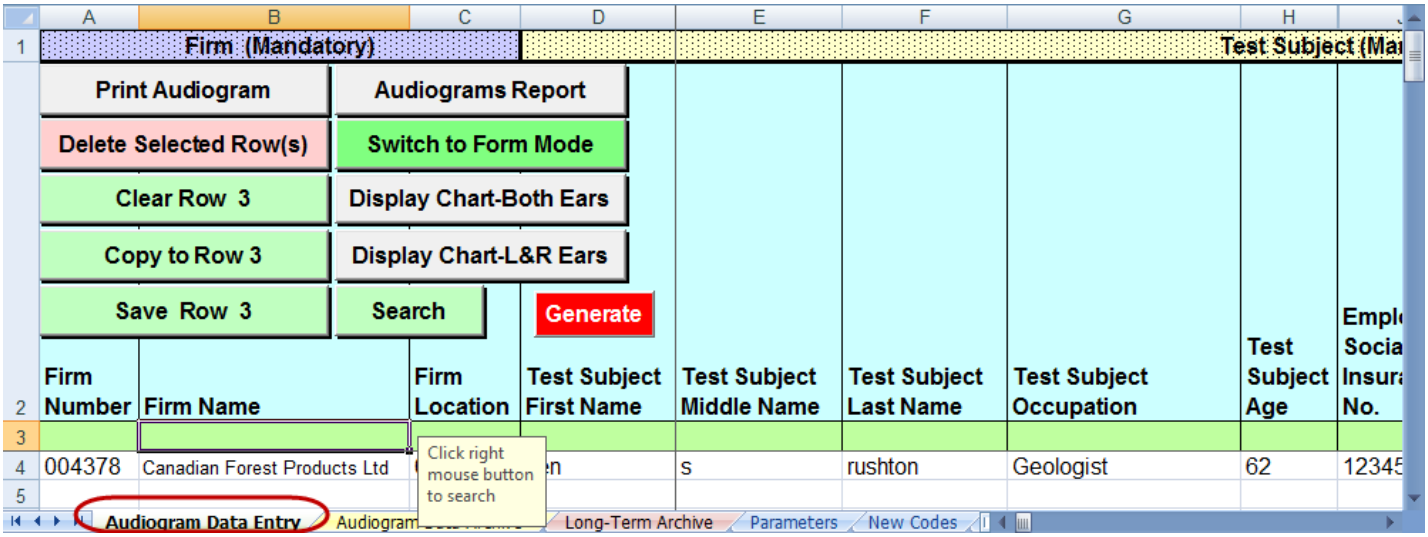
You select any tab, any data sheet, by clicking on a tab name, i.e. **Audiogram Data Entry** as above, or Audiogram Data Archive, Long-term Archive, parameters and so on.



Audiogram Data Entry tab – recently entered data

The '*Audiogram Data Entry*' tab (spreadsheet) is where tests are entered and contains hearing tests that have been saved, before they are generated and moved to the *Audiogram Data Archive* tab. Click on this tab to bring this spreadsheet forward.

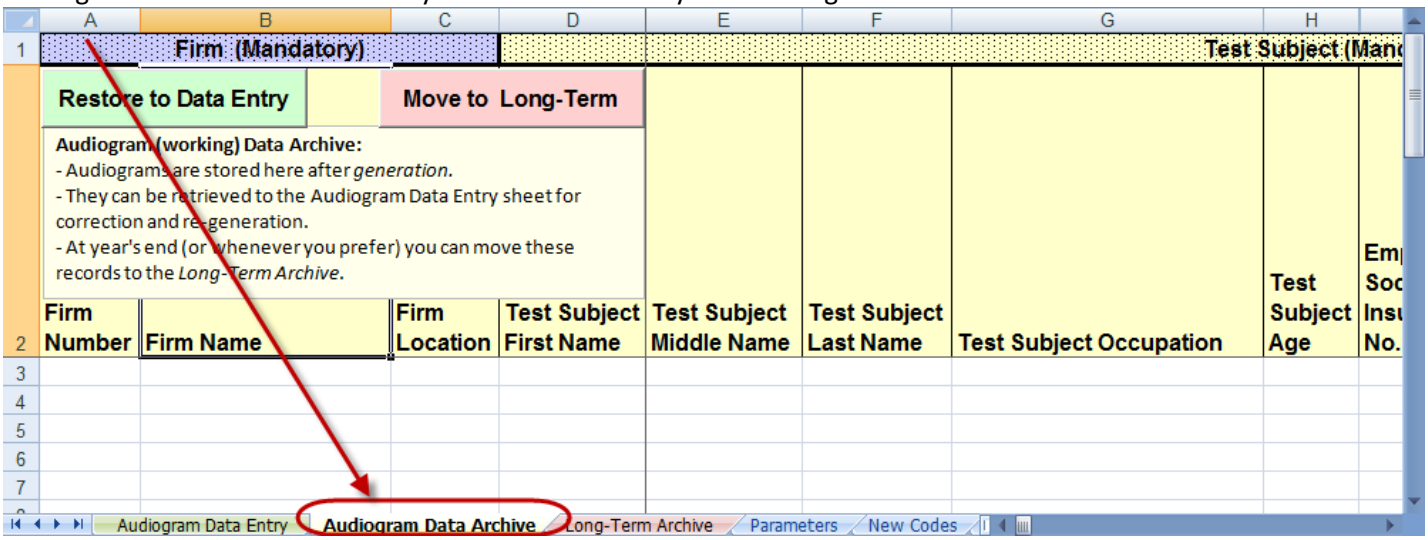
Data entry can be done here in row three (all other rows are protected against update). While data entry can be done directly on Row 3, it is complex for the novice. On the next page we describe how to enter the simpler *Forms Mode*.



The 'Audiogram Data Entry' tab is where your active data resides. Here you may quickly enter hearing test data or corrections in the light green row in the centre. The rows below the green input row contain the data that you have entered and stored with the "Save Row 3" command.

Audiogram Data Archive tab – generated & on-hold data

The 'Audiogram Data Archive' tab contains hearing tests that have been *generated* into an audiogram data file or hearing tests that were intentionally archived before they have been generated.


Firm (Mandatory)
Test Subject (Mand
Restore to Data Entry
Move to Long-Term
Audiogram (working) Data Archive:
- Audiograms are stored here after generation.
- They can be retrieved to the Audiogram Data Entry sheet for correction and re-generation.
- At year's end (or whenever you prefer) you can move these records to the Long-Term Archive.
Firm Number
Firm Name
Firm Location
Test Subject First Name
Test Subject Middle Name
Test Subject Last Name
Test Subject Occupation
Test Subject Age
Audiogram Data Entry
Audiogram Data Archive
Long-Term Archive
Parameters
New Codes

Long-Term Archive tab

Don’t worry about this tab – it is to hold last year’s data for year-on-year comparisons.

Other Tabs

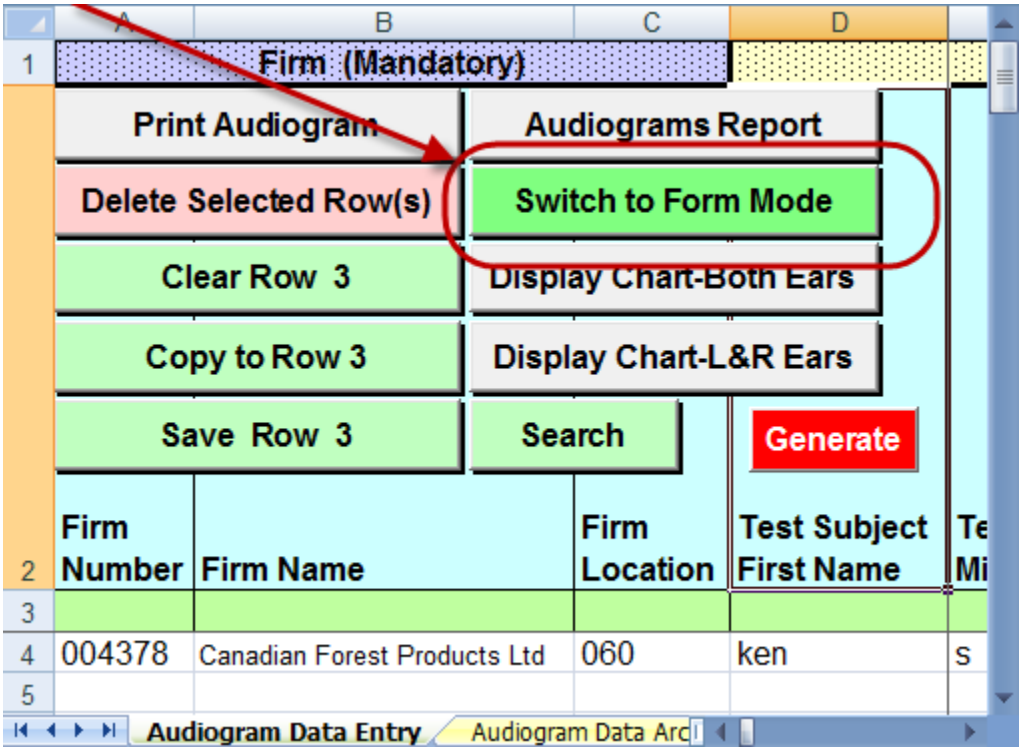
Can be ignored for now.

Entering a Hearing Test in Form Mode

To bring up the audiogram form, click the '*Switch to Form Mode'* button in the 'Audiogram Data Entry' tab.

Any data that you have already entered in row 3 of the 'Audiogram Data Entry' tab will be loaded into the audiogram form.

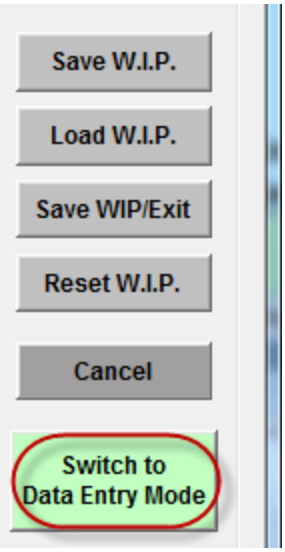
Of course, if row 3 is empty, the audiogram form fields will also be empty.



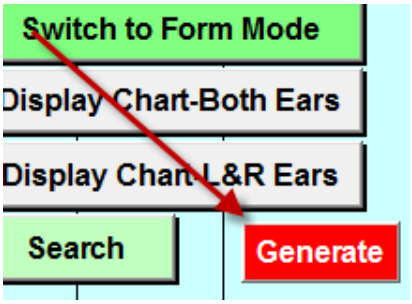
Exiting Forms mode and Generating entered forms

Switching To Data Entry Mode

The 'Data Entry Mode' button will close the audiogram form and populate row 3 of the 'Audiogram Data Entry' tab with all the data entered in the audiogram form up to that point.

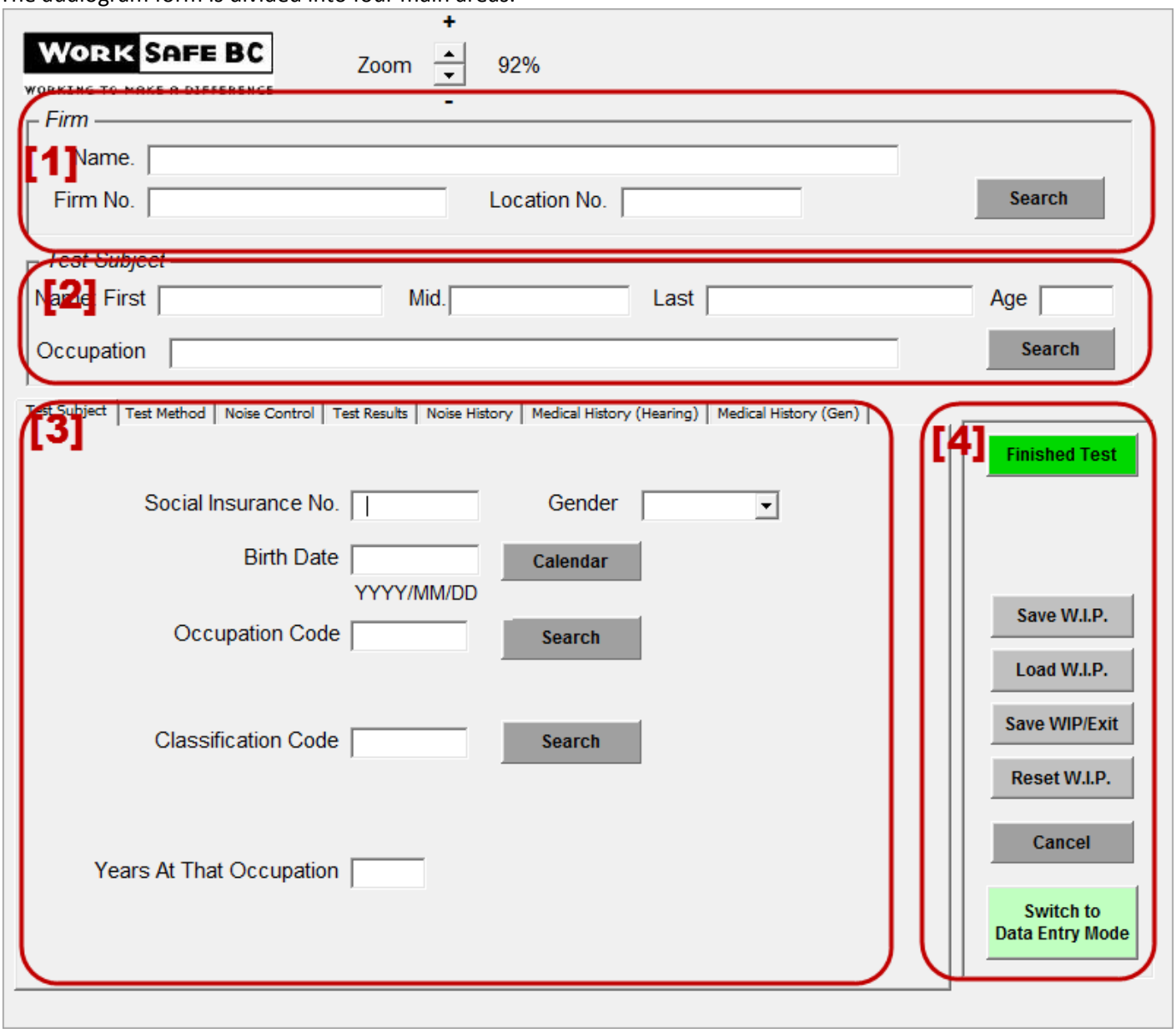


At this point, if you have entered a form, then you can generate it and send it to us at WorkSafeBC, using our portal. For details of how to do this, see the ***Industrial Audiometric System User Manual*** and the ***Industrial Audiometric System Administrator*** manual, available in: www2.worksafebc.com/Topics/HearingLossPrevention/Home.asp .



Different Areas of the Audiogram Entry Form

The audiogram form is divided into four main areas.



[1] At the top is the firm area that contains the name, firm number and location of a firm. There is a 'Search' button in this area to bring up the 'Select Firm' window.

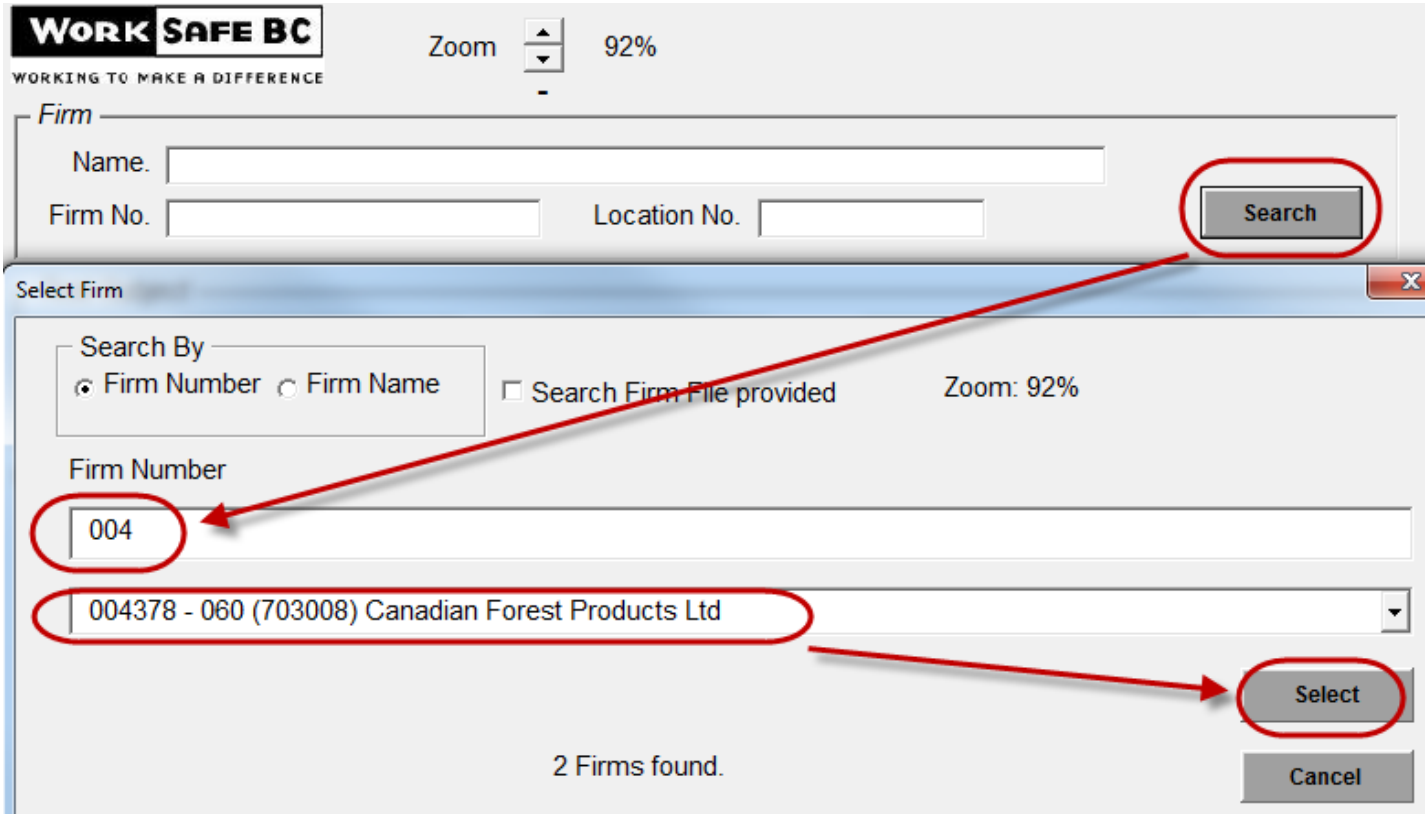
[2] Below the firm area is the test subject area which contains the first name, last name, age and occupation of a test subject. There is a 'Search' button in this area to bring up the 'Select Test Subject' window.

[3] Below the test subject area is the data area where different groups of data are separated into different form tabs. You can move to a specific form tab by clicking on the tab name. The 'Test Subject' tab is always displayed when the audiogram form is first displayed. There is a 'Search' button in this area to bring up the 'Select Occupation Code' window, a 'Search' button in this area to bring up the 'Select Classification Code' window and a 'Calendar' button in this area to bring up the 'Select Test Subject Birth Date' window.

[4] On the right hand side is the command area where all the command buttons are located.

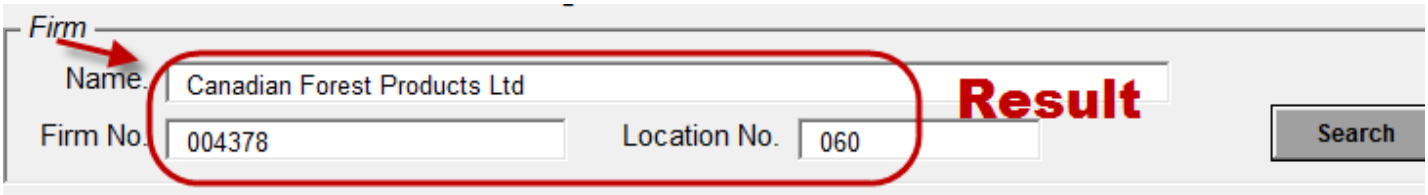
Entering Firm Information

The 'Name', 'Firm No.' and 'Location No.' fields **do not allow you to enter data directly**. You must select a firm number, firm location and firm name combination from the 'Firms' tab or from the firm data file by clicking on the 'Search' button to bring up the 'Select Firm' window.



Refer to the 'Entering Firm Info' section under 'Data Entry Mode' in Part 2 of the user manual for detail instructions on how to search a firm in the 'Select Firm' window.

After you have selected a firm in the dropdown box in the 'Select Firm' window, clicking the 'Select' button to select the firm.



The corresponding fields in the audiogram form will be automatically filled in. The classification code is also filled, in if the classification code is available in the selected firm in the dropdown list. The description for the classification code is also displayed below the classification code.

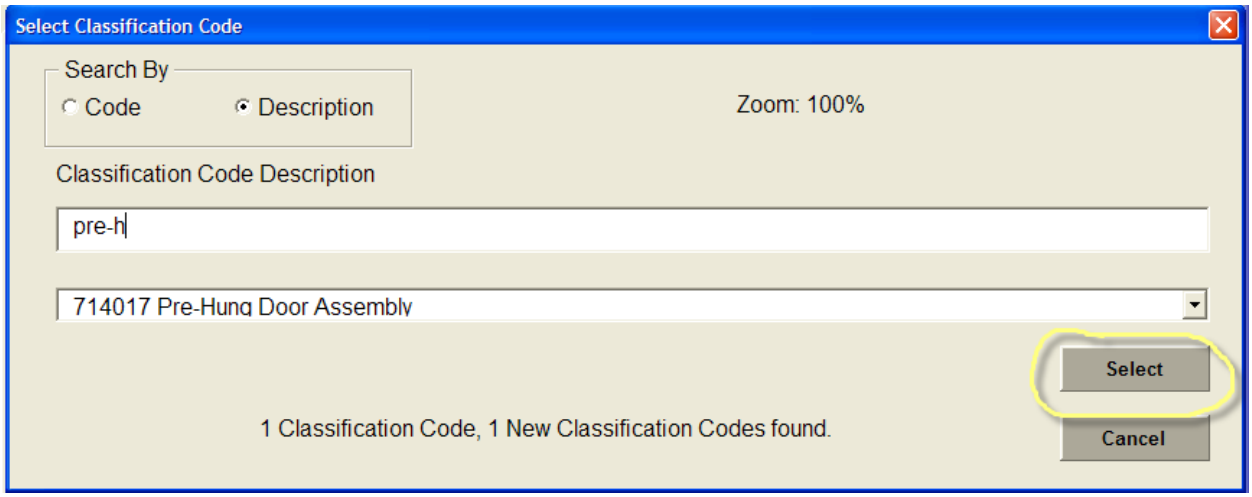
Entering the 'Classification Code' Field

This field can be entered directly or selected from the 'Select Classification Code' window even after it is automatically filled in when you selected a firm number, firm location, firm name and classification code from the 'Select Firm' window.

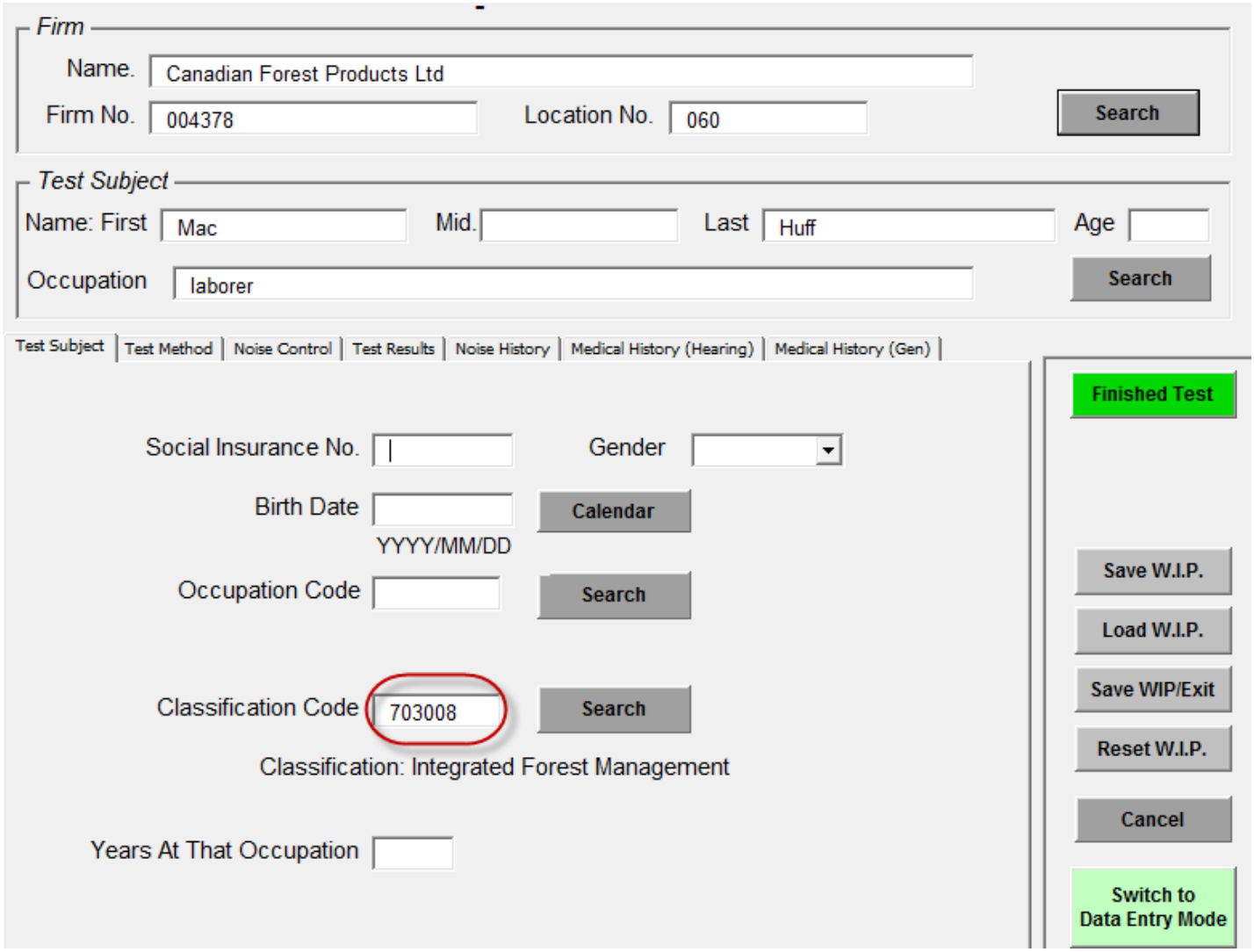
Click on the 'Search' button to bring up the 'Select Classification Code' window.

Refer to the 'Select Classification Code From The 'Classification Codes' Tab' section under 'Data Entry Mode' in Part 1 of the user manual for detail instructions on how to search a classification code in the 'Select Classification Code' window.

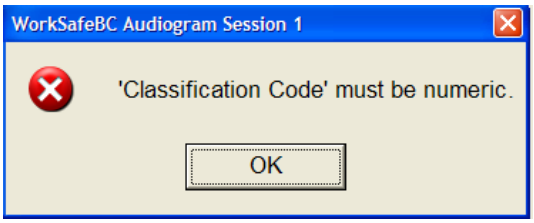
Once you have found a classification code for the hearing test in the 'Select Classification Code' window, clicking the 'Select' button to select the classification code.



The 'Classification Code' field in the audiogram form will be automatically filled by the select classification code. The description for the selected classification code is displayed under the classification code.

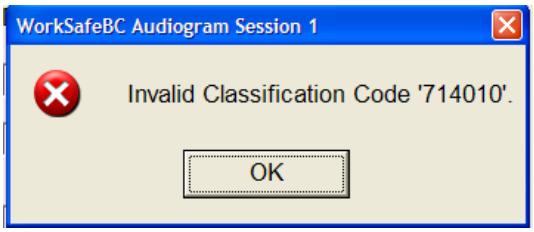


If you enter a classification code directly, you will see the following error message if the classification code contains non numeric characters.



If you enter a classification code directly, you will see the following error message if the classification code is less than 6 digits or not found in the 'Classification Codes' and 'New Codes' tabs.

If you see this message and you know the classification code is valid, then you should enter this classification code in the 'New Code' tab for classification code.



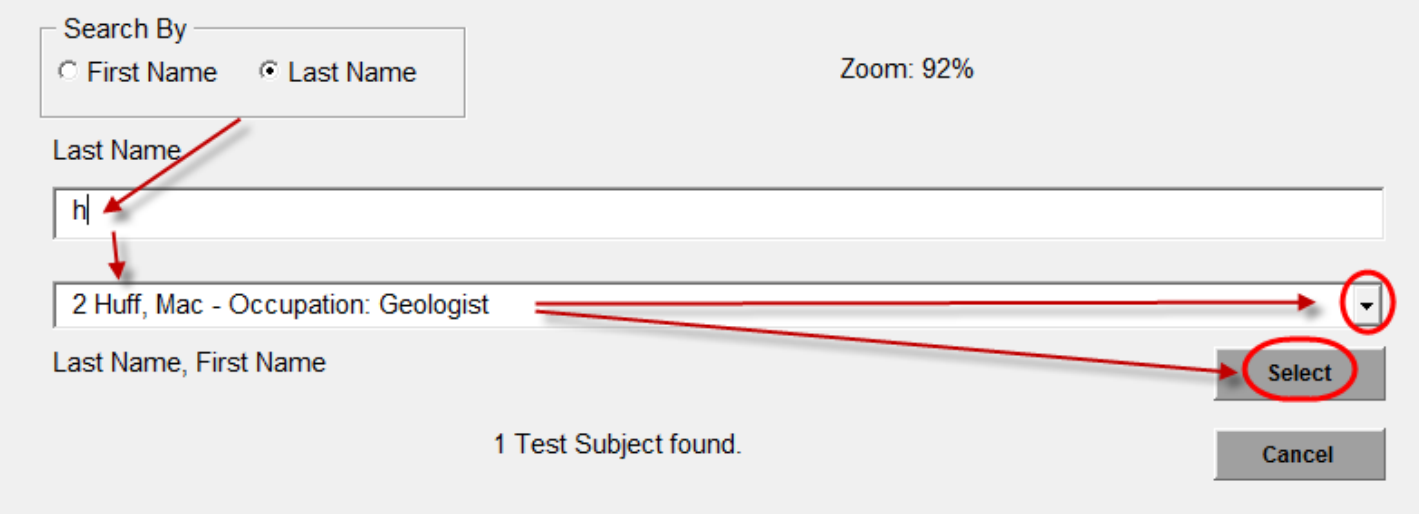
Entering 'Test Subject' Info

You can enter the 'First Name', 'Last Name' and 'Occupation' fields directly or you can search for a test subject that have been saved in the 'Test Subjects' tab – subjects are saved in the Test subjects Tab when their test is saved. The 'Age' field is calculated by the audiogram program from the 'Birth Date' field.

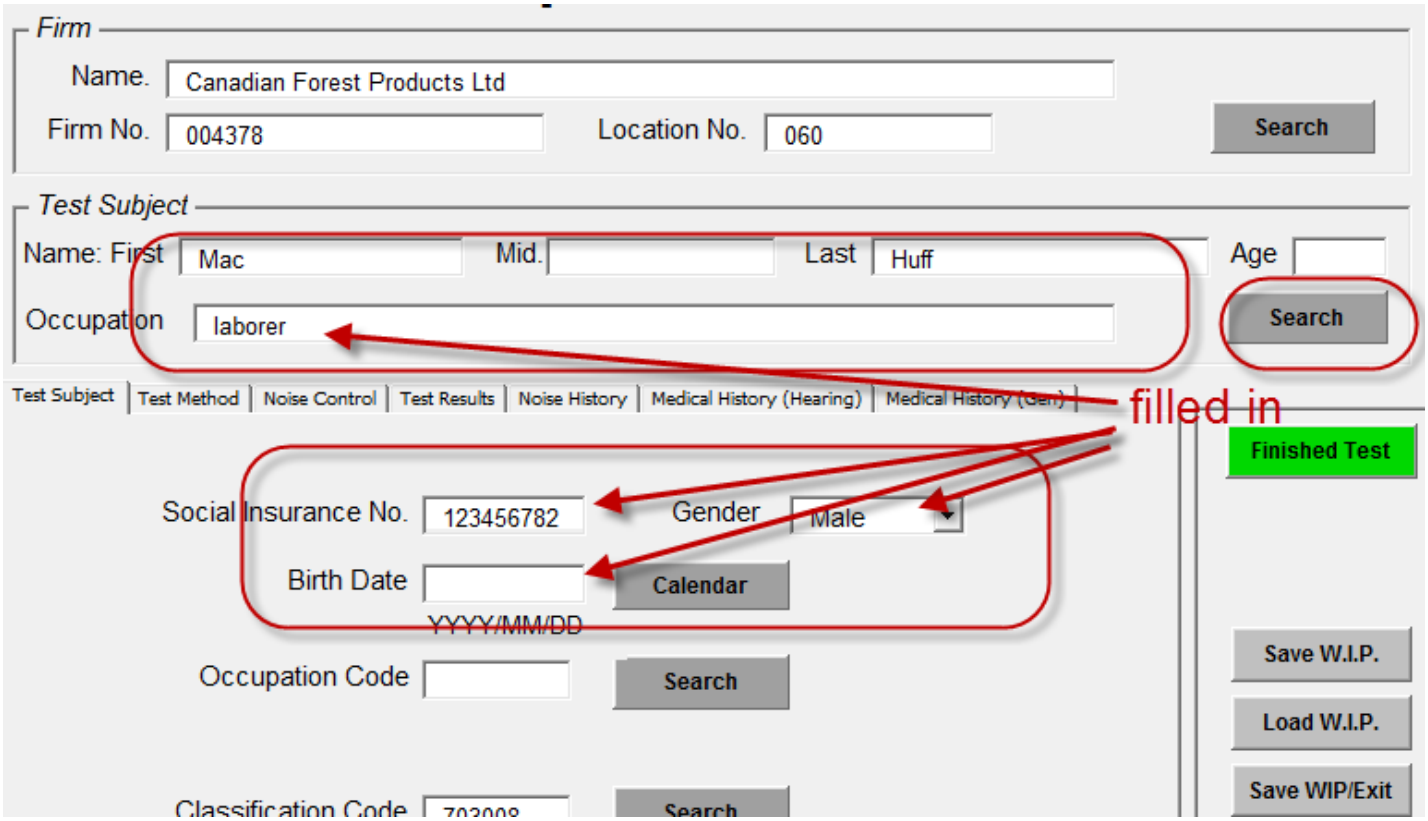
Click on the 'Search' button to bring up the 'Select Test Subject' window to search for a test subject.

Refer to the 'Entering Test Subject Info' section under 'Data Entry Mode' in Part 1 of the user manual for detail instructions on how to search a test subject in the 'Select Test Subject' window.

After you have selected a test subject in the dropdown box, click the 'Select' button to select the test subject.



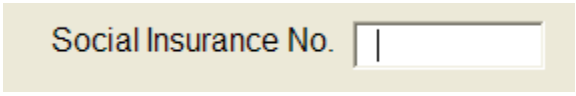
The corresponding fields in the audiogram form will be automatically filled in.
The 'Age' field will be calculated if the birth date field is filled in.



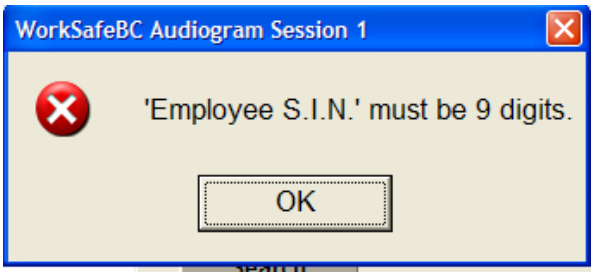
Entering 'Social Insurance No.' Field

This field can be entered directly or selected as part of the test subject info from the 'Select Test Subject' window. It can be changed even after it is automatically filled in from the 'Select Test Subject' window.

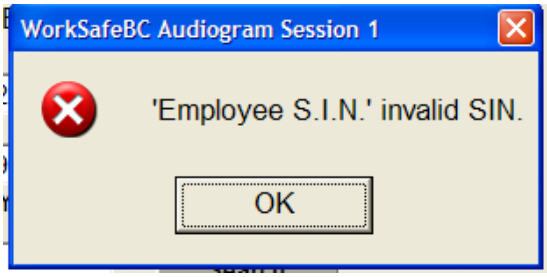
This field is a 9 digits social insurance number.



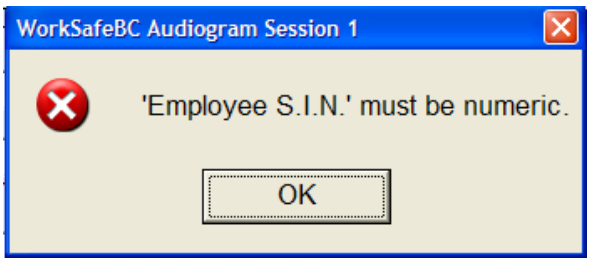
You will see this error message if you enter a number less than 9 digits.



You will see this error if you try to enter a number with more than 9 digits or an invalid 9 digits SIN.



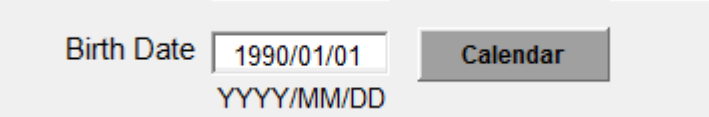
You will see this error message if you enter a non numeric character.



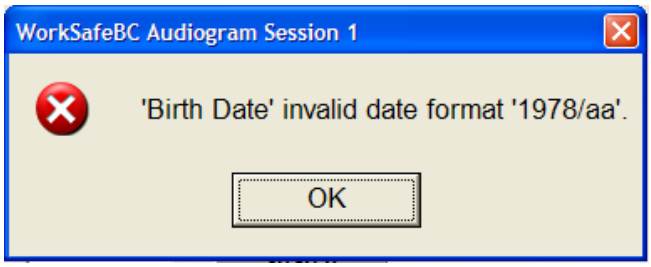
Entering 'Birth Date' Field

This field can be entered directly or selected as part of the test subject info from the 'Select Test Subject' window. It can be changed even after it is automatically filled in from the 'Select Test Subject' window.

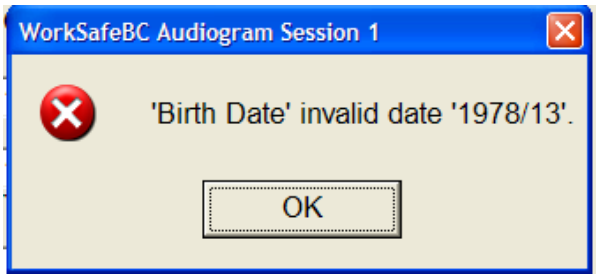
Enter the birth date in YYYY/MM/DD format.



You will see the following error message if you enter a birth date in the wrong format.



You will see the following error message if you enter a birth date that is not a valid date.



You can select the birth date from a Calendar window by clicking on the 'Calendar' button.

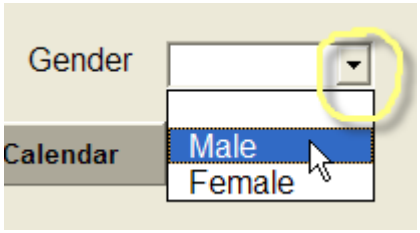
Entering 'Gender' Field

This field can be entered directly or selected as part of the test subject info from the 'Select Test Subject' window. It can be changed even after it is automatically filled in from the 'Select Test Subject' window.

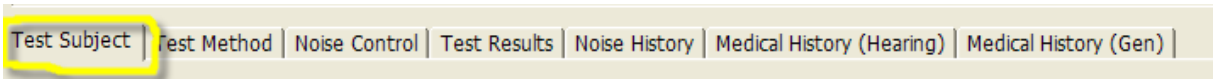
The gender field can be select from a dropdown list or by typing the first letter of the items in the dropdown list.

If you type the letter m, the Gender field will be automatically fill with the 'Male' item from the dropdown list.

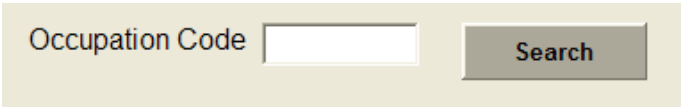
You can select one of the valid values from the dropdown list by clicking on the dropdown button on the right hand side and then select one of the values in the dropdown list.



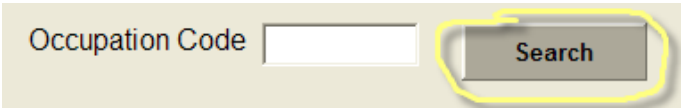
Entering 'Occupation Code' Field



This field can be entered directly or select from the 'Select Occupation Code' window.

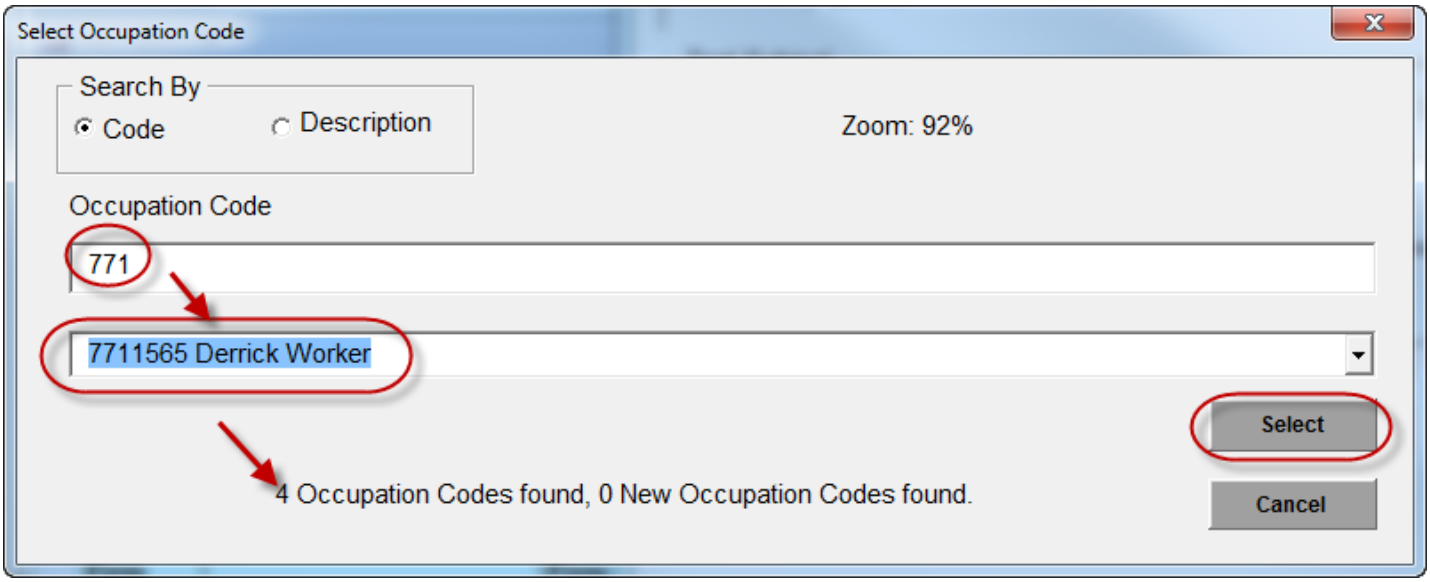


Click on the 'Search' button to bring up the 'Select Occupation Code' window.

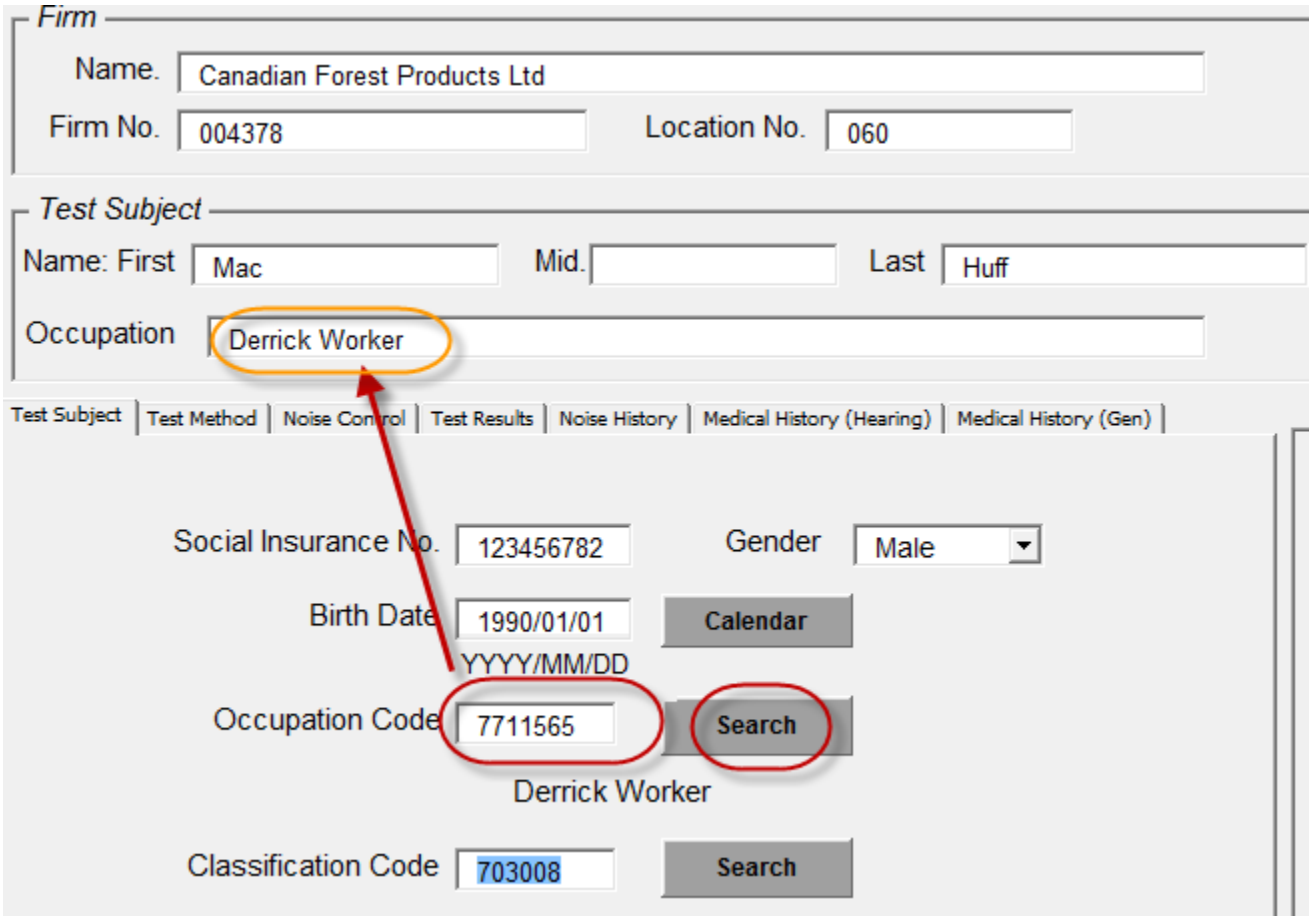


Refer to the 'Select Occupation Code From The 'Occupation Codes' Tab' section under 'Data Entry Mode' in Part 1 of the user manual for detail instructions on how to search an occupation code in the 'Select Occupation Code' window.

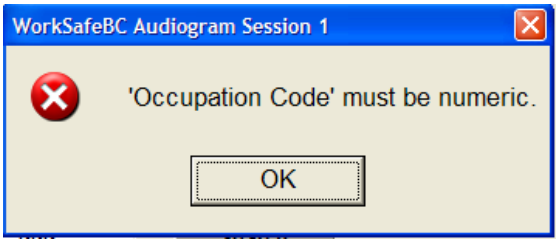
Once you have found an occupation code for the hearing test in the 'Select Occupation Code' window, click the 'Select' button.



The 'Occupation Code' field will be automatically filled in the audiogram form. You will notice the description for the selected occupation code is displayed under the occupation code.



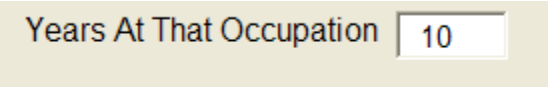
You will see this message if the occupation code contains non numeric characters.



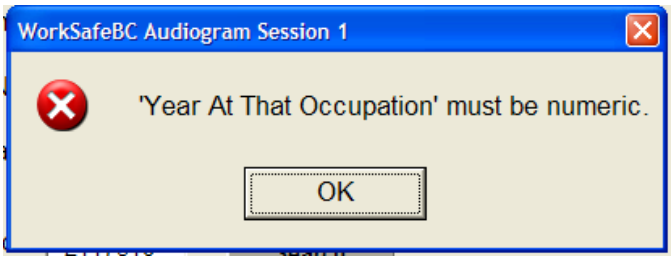
You will see this error message if the occupation code is less than 7 digits or not found in the 'Occupation Codes' and 'New Codes' tabs. If you see this message and you know the occupation code is valid, then you should enter this occupation in the 'New Code' tab for occupation code.

Entering 'Years at That Occupation' Field

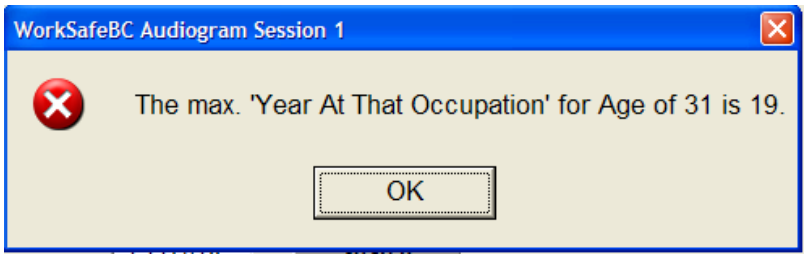
Enter a number in this field.



You will see this error message if you enter a non numeric character.

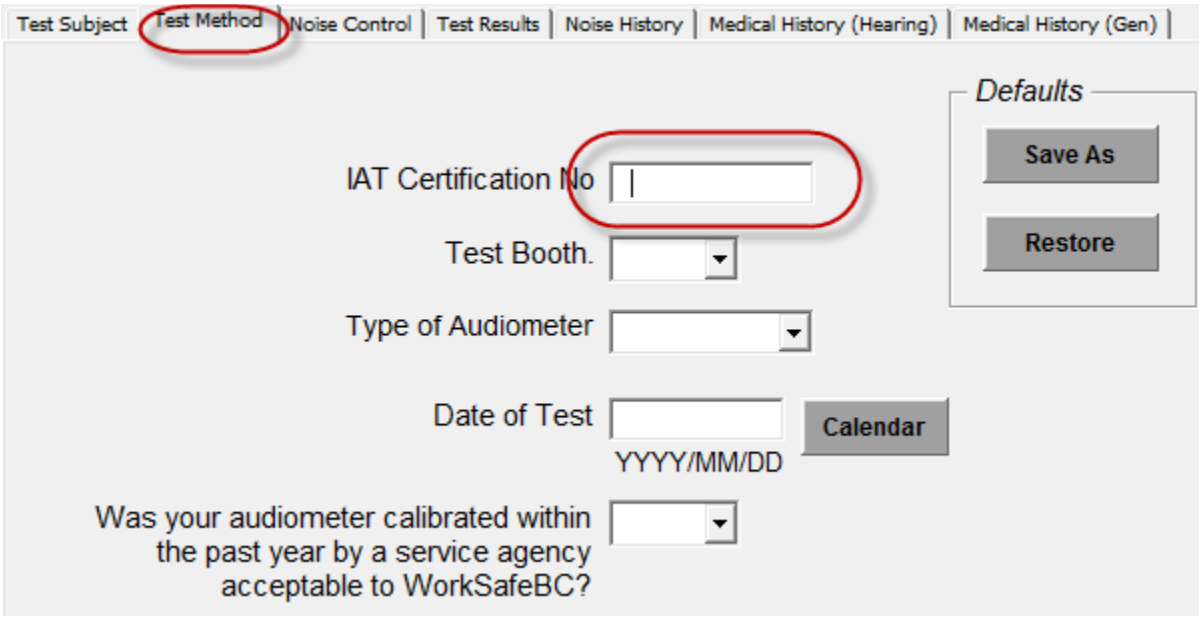


You will see this error message if you enter a value greater than the test subject's age minus 12, because the earliest age for a worker is 12 (31 – 12 = 19).



Entering Test Method Info

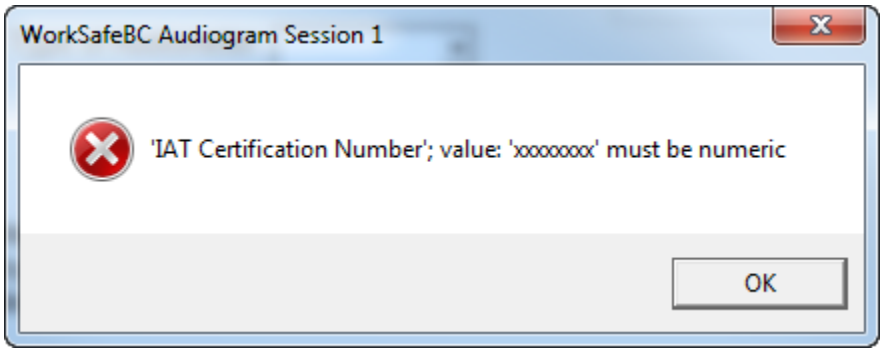
Click the 'Test Method' tab to display all the fields in this tab.



Entering 'IAT Certification Number' Field

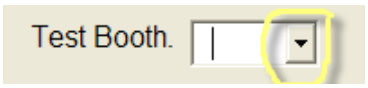
The IAT Certification Number of the person who conducted the test must be entered. This field will be validated when the data is uploaded to WorkSafeBC.

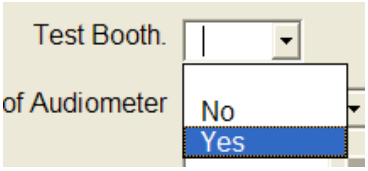
You will see this error message if you entered a contractor number with non numeric character or outside the range of allowed values.

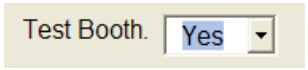


Entering the 'Test Booth' Field

You can select one of the valid values from the dropdown list by clicking on the dropdown button on the right hand side and then select one of the values in the dropdown list.



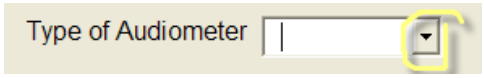


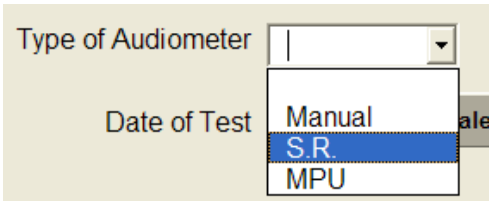


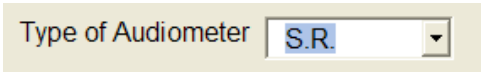
You can also type the letter 'y' or 'n' and 'Yes' or 'No' will be automatically filled in for you.

Entering the 'Type of Audiometer' Field

You can select one of the valid values from the dropdown list by clicking on the dropdown button on the right hand side and then select one of the values in the dropdown list.



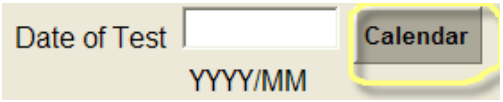




You can also type the letter 'm', 's' or 'mp' and 'Manual', 'S.R.' or 'MPU' will be automatically filled in for you.

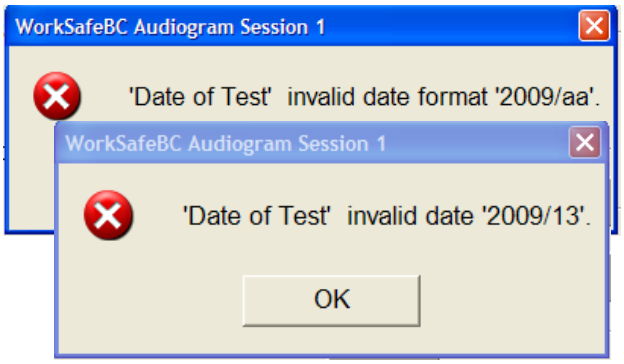
Entering the 'Date of Test'

The 'Date of Test' must be a date in the YYYY/MM format. You can select the test date from the Calendar window by clicking on the 'Calendar' button.
You can also enter the test date directly into the 'Date of Test' field.



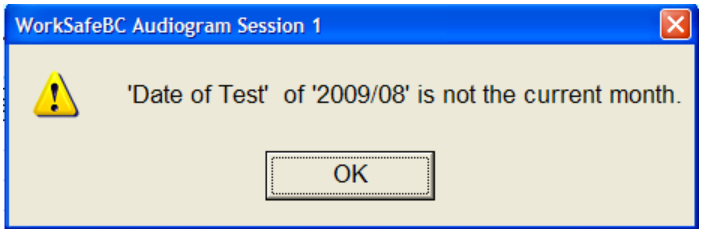
You will see the following error message if you enter non numeric characters for the year or month.

You will see the various error messages if you enter an invalid date.


WorkSafeBC Audiogram Session 1
'Date of Test' invalid date format '2009/aa'.
WorkSafeBC Audiogram Session 1
'Date of Test' invalid date '2009/13'.
OK

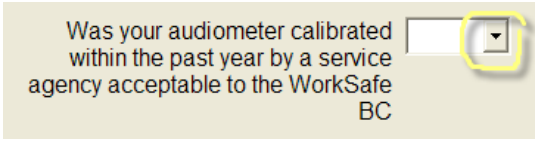
You will see the following warning message to remind you that you have enter a test date that is not in the current month.

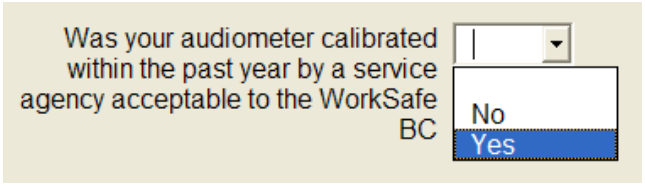
This is only a warning message and it will not stop you from entering an older test date.

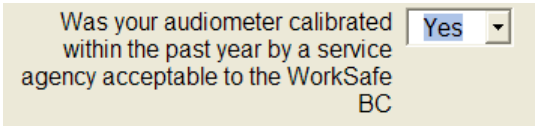


Entering 'Was your audiometer calibrated. . . .' Field

You can select one of the valid values from the dropdown list by clicking on the dropdown button on the right hand side and then select one of the values in the dropdown list.



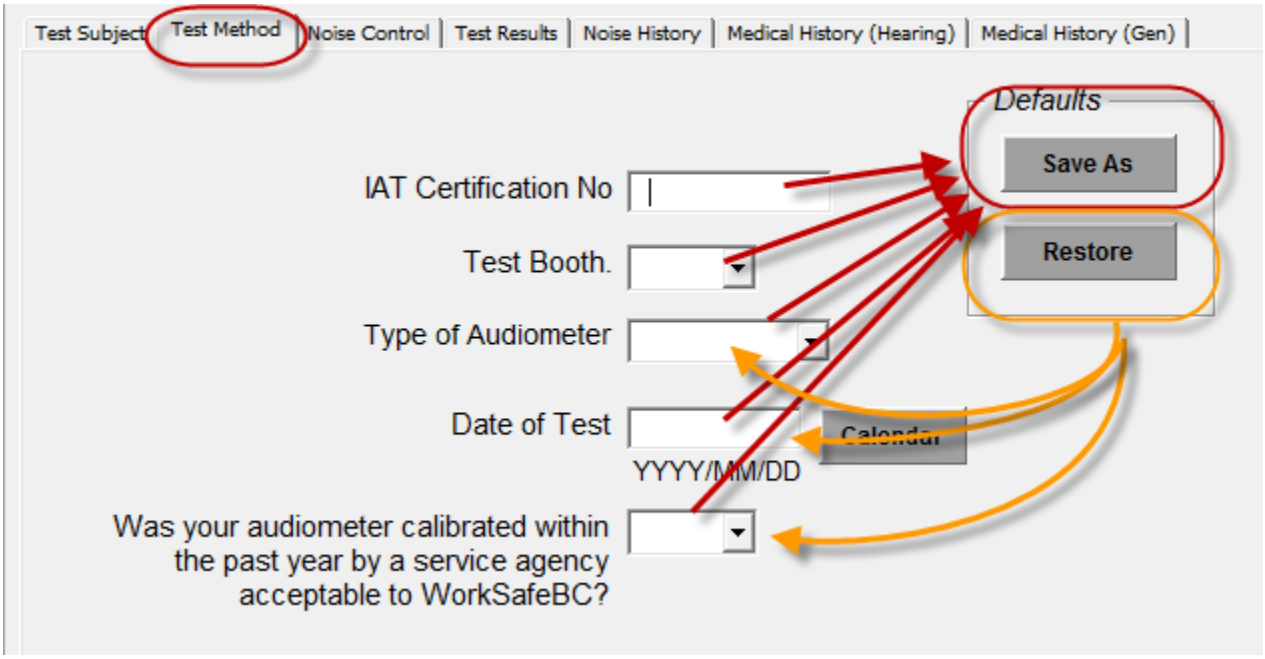




You can also type the letter 'y' or 'n' and 'Yes' or 'No' will be automatically filled in for you.

Saving and restoring the "Test Method" Data

Since the data in the 'Test Method' tab are generally the same for all the hearing tests. You can click on the 'Save As' button to save the current data in this tab for future use.

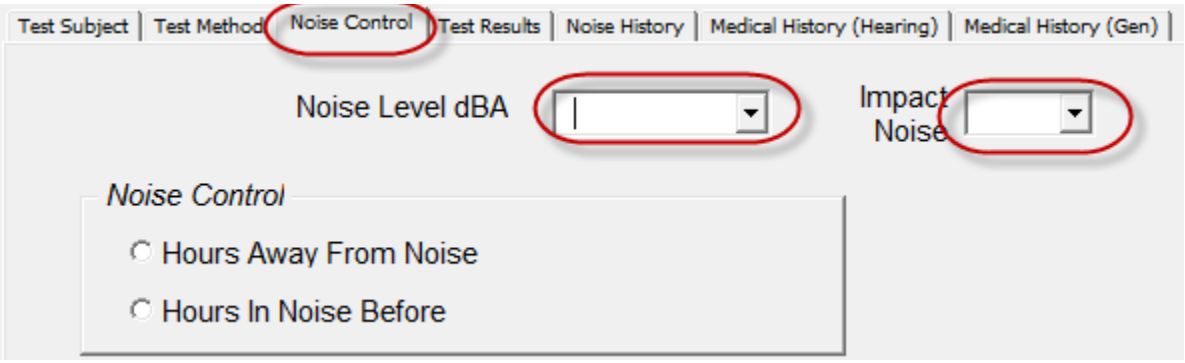


When you completed and saved a hearing test, all the fields in the 'Test Method' fields are reset to blanks.

You can restore these default values in the 'Test Method' tab by clicking on the 'Restore' button.

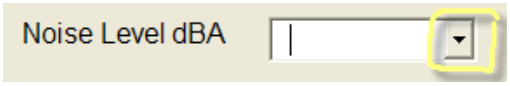
Entering 'Noise Control' *Info*

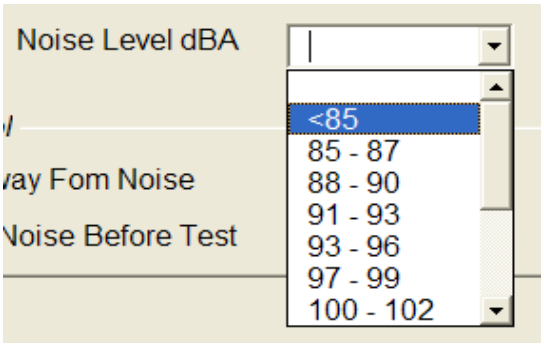
Click the 'Noise Control' tab to display all the fields in this tab.



Entering 'Noise Level dBA' Field

You can select one of the valid values from the dropdown list by clicking on the dropdown button on the right hand side and then select one of the values in the dropdown list.

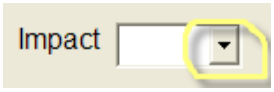


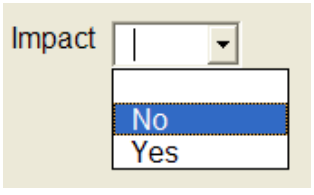


You can also type in the number in this field; the first value that matches what you typed will be automatically filled in for you.

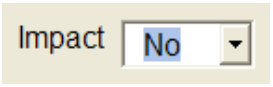
Entering 'Impact Noise' Field

You can select one of the valid values from the dropdown list by clicking on the dropdown button on the right hand side and then select one of the values in the dropdown list.





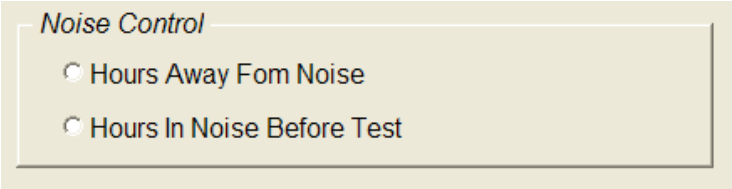
➔



You can also type the letter 'y' or 'n' and 'Yes' or 'No' will be automatically filled in for you. Note that the term "Impact Noise" refers to noise of 140 dBC or greater.

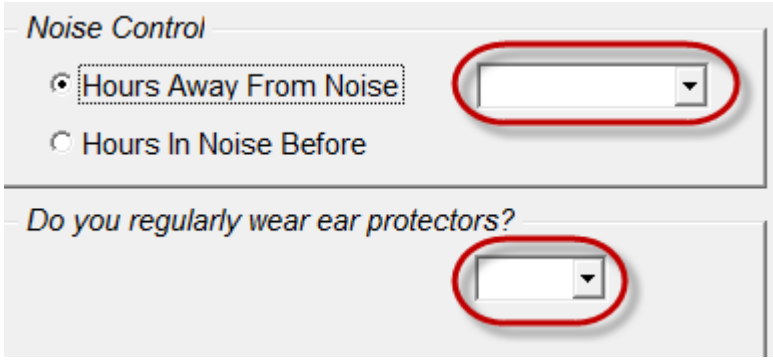
Entering 'Hours Away From Noise' or 'Hours In Noise Before Test' Field

You must select either the 'Hours Away From Noise' or 'Hours In Noise Before Test' option button.

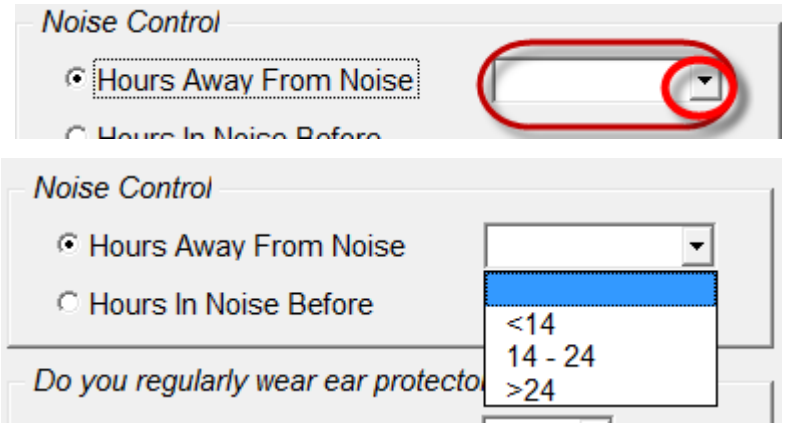


Entering 'Hours Away From Noise' Field

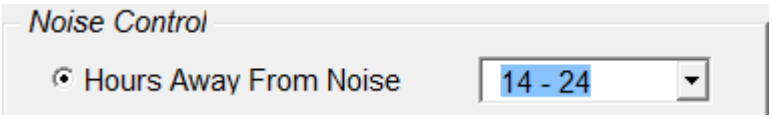
As selections are made, logical related options appear



Select one of the valid values from the dropdown list for 'Hours Away From Noise' by clicking on the dropdown button on the right hand side and then selecting one of the values in the dropdown list.

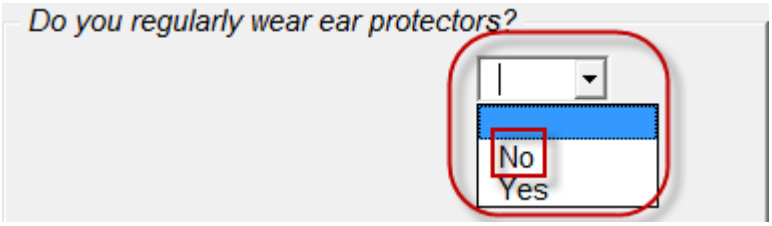


➔

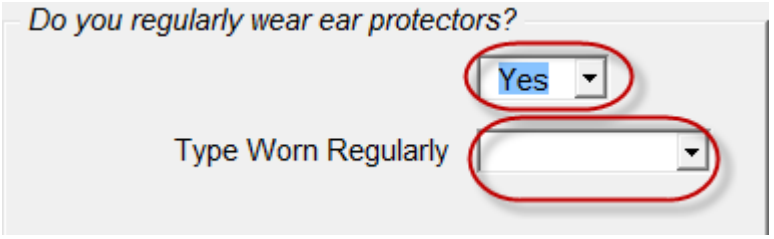


Likewise, you can select one of the valid values from the dropdown list for 'Do you regularly wear ear protectors'.

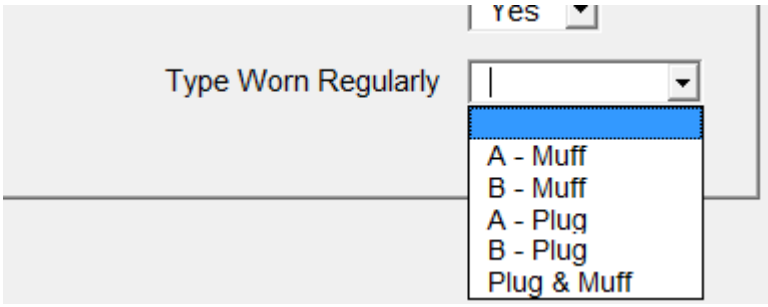
If you select 'No' from the dropdown list, the 'Type Worn Regularly' dropdown box will not be displayed.



As expected, if you select 'Yes' from the dropdown list, the 'Type Worn Regularly' dropdown box will display.

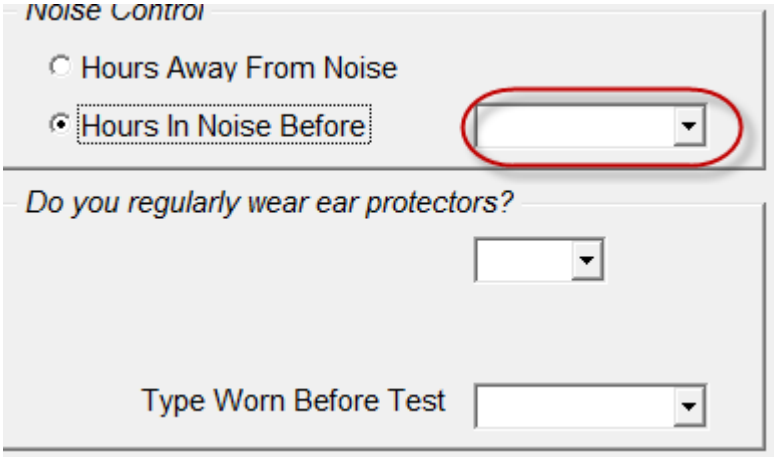


You can select one of the valid values from the dropdown list for 'Type Worn Regularly' by clicking on the dropdown button on the right hand side and then select one of the values in the dropdown list.



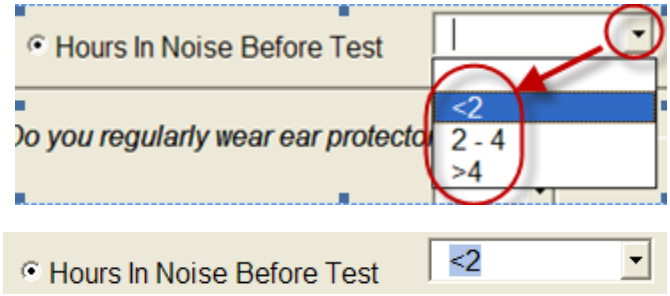
Entering 'Hours In Noise Before Test' Field

Here we have selected 'House In Noise Before Test' option and the dropdown boxes for 'House In Noise Before Test' and 'Do you regularly wear ear protectors' are displayed.



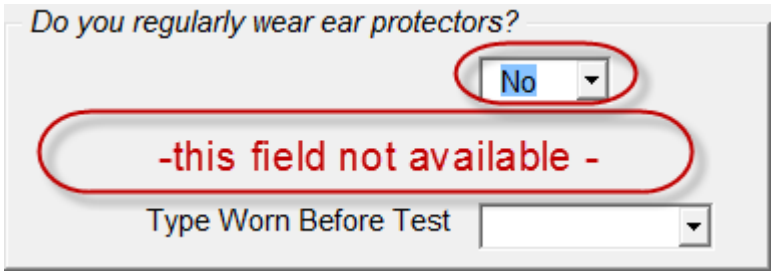
You can select one of the valid values from the dropdown list for 'House In Noise Before Test' by clicking on the dropdown button on the right hand side and then select one of the values in the dropdown list.

You can select one of the valid values from the dropdown list for 'Do you regularly wear ear protectors' by clicking on the dropdown button on the right hand side and then select one of the values in the dropdown list.

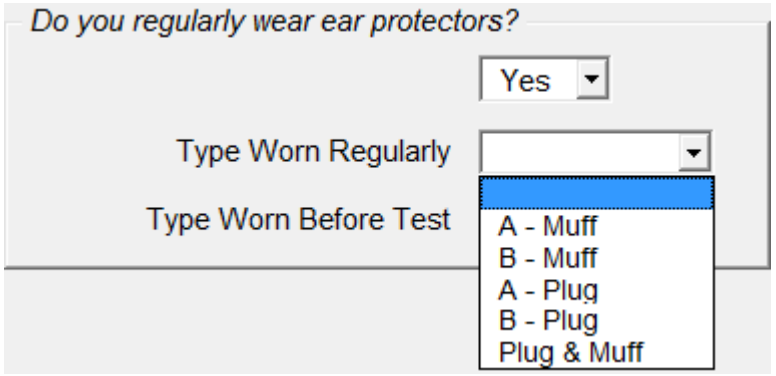


If you select 'No' from the dropdown list, the 'Type Worn Regularly' question will not be displayed.

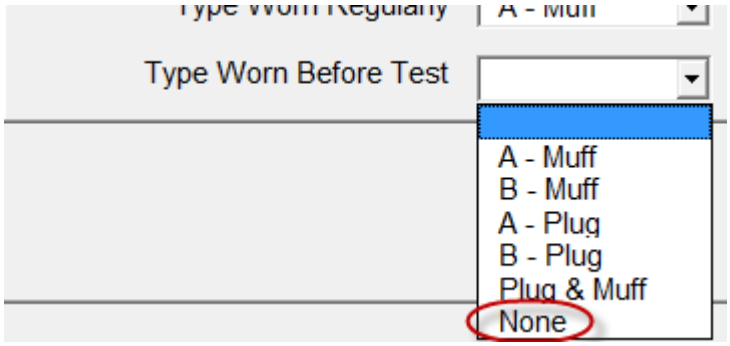
But the 'Type Worn Before Test' will be, as the worker may have been in an unusually noisy situation for him/her and have worn protection.



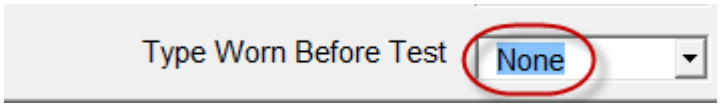
If you select "yes", you can select one of the valid values from the dropdown list for 'Type Worn Regularly' by clicking on the dropdown button on the right hand side and then select one of the values in the dropdown list.



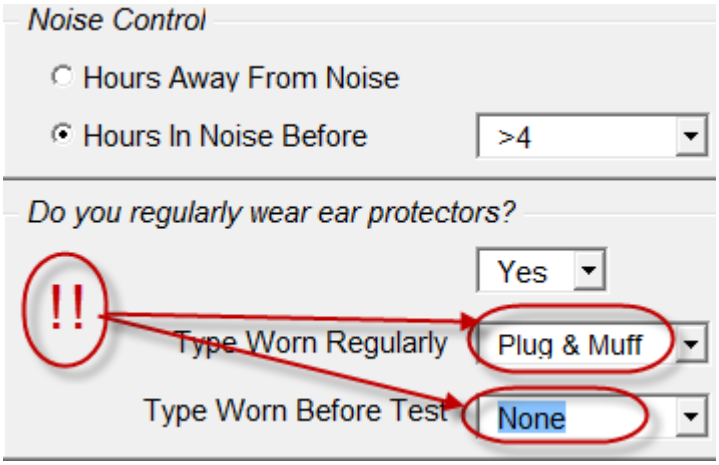
Select one of the valid values from the dropdown list for 'Type Worn Before Test'.



Note that there is an extra option "None". ➔
We find that this is a surprisingly common answer.

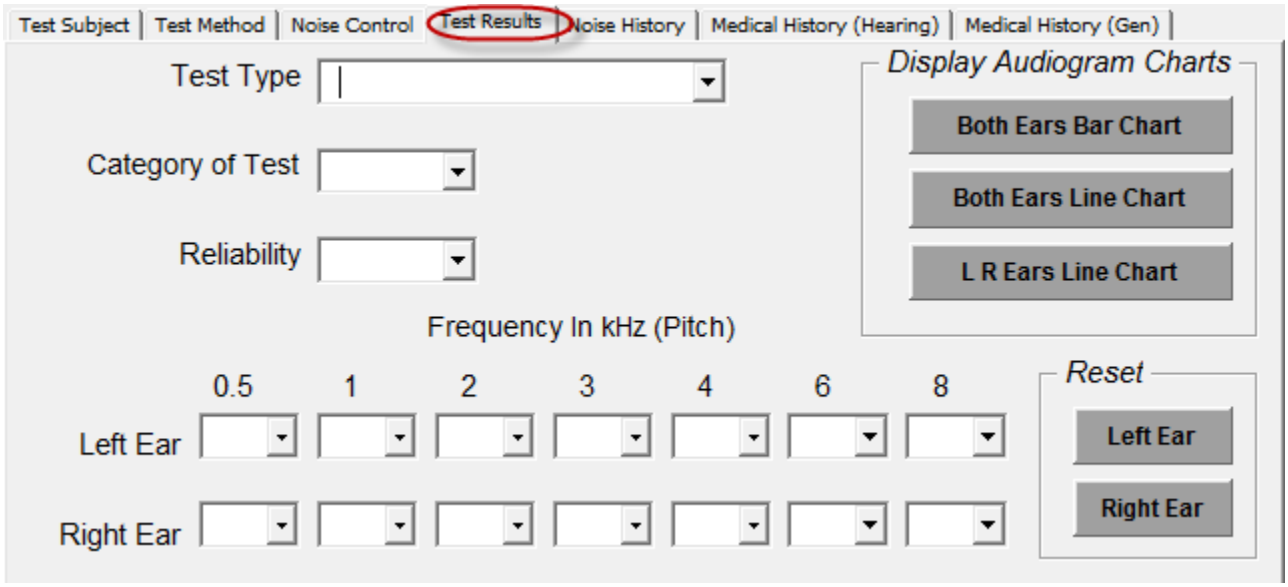


Note: Unusual combinations of values are allowed, as we have found that some people are careless of their hearing.



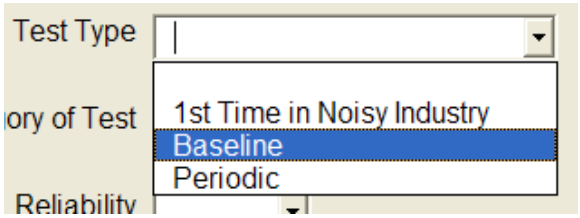
Entering Test Results Info

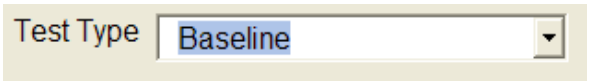
Click the 'Test Results' tab to display all the fields in this tab.



Entering 'Test Type' Field

You can select one of the valid values from the dropdown list by clicking on the dropdown button on the right hand side and then select one of the values in the dropdown list.

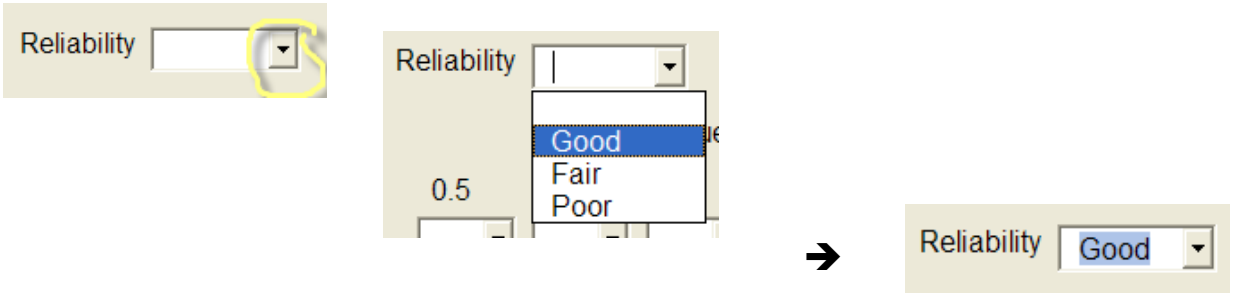




You can also type in the first character of each of the items in the dropdown list and the item will be automatically filled in for you.

Entering 'Reliability' Field

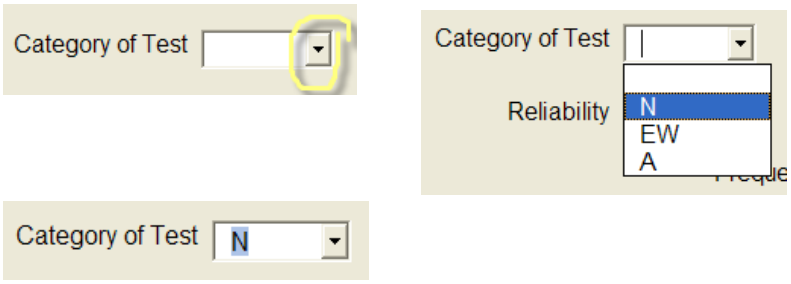
You can select one of the valid values from the dropdown list by clicking on the dropdown button on the right hand side and then select one of the values in the dropdown list.



You can also type in the first character of each of the items in the dropdown list and the item will be automatically filled in for you.

Entering 'Category of Test' Field

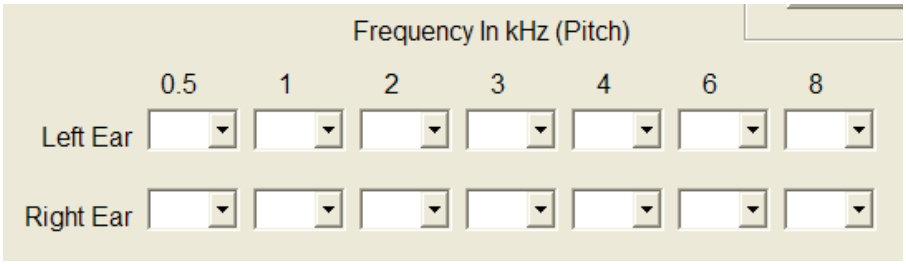
You can select one of the valid values from the dropdown list by clicking on the dropdown button on the right hand side and then select one of the values in the dropdown list.



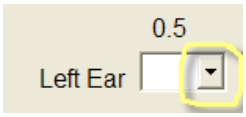
You can also type in the first character of each of the items in the dropdown list and the item will be automatically filled in for you.

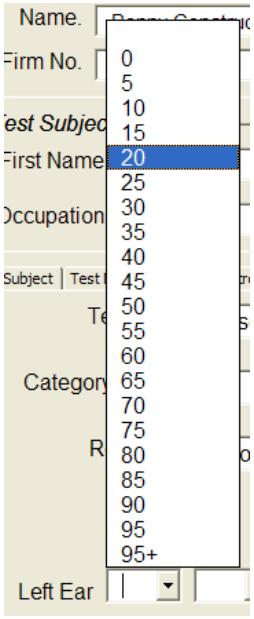
Entering Hearing Test Result Fields

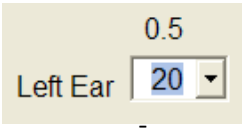
All the hearing test result fields for left and right ears have the same values in the dropdown list.
Here 'Left ear 05 KHZ' is used as an example.



You can select one of the valid values from the dropdown list by clicking on the dropdown button on the right hand side and then select one of the values in the dropdown list.



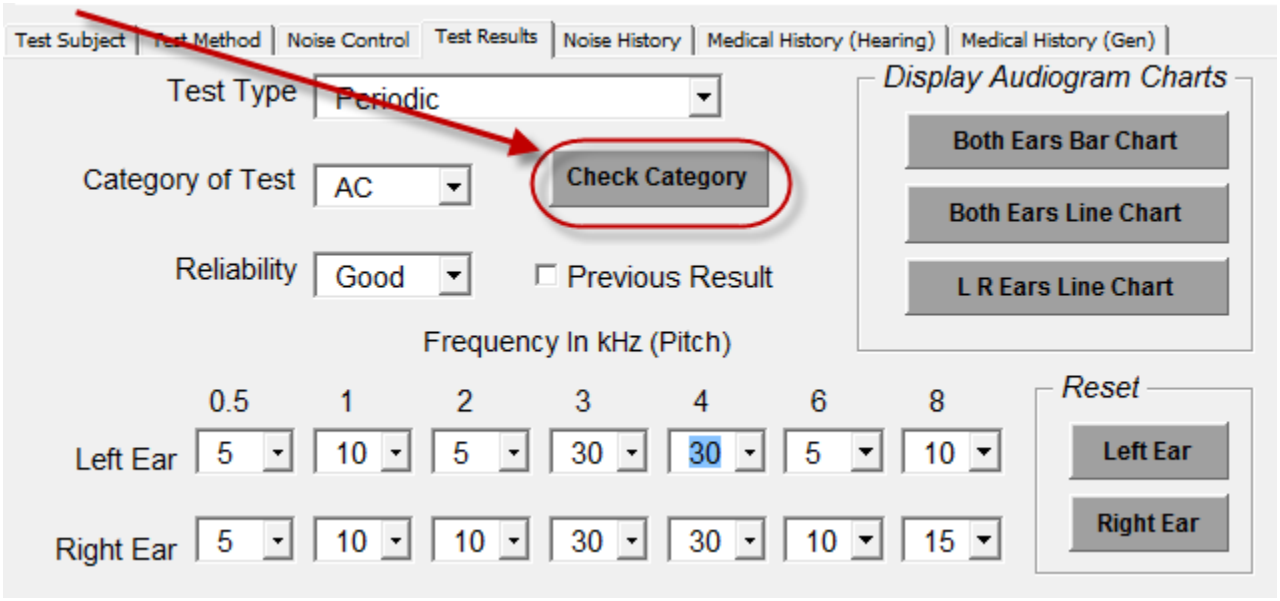




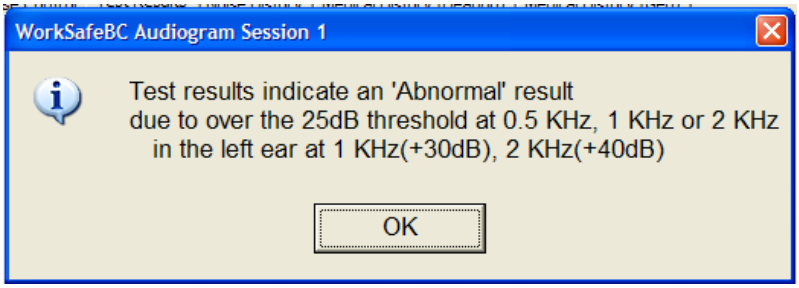
You can also type in the value for each of the boxes.

Checking the hearing test results Category

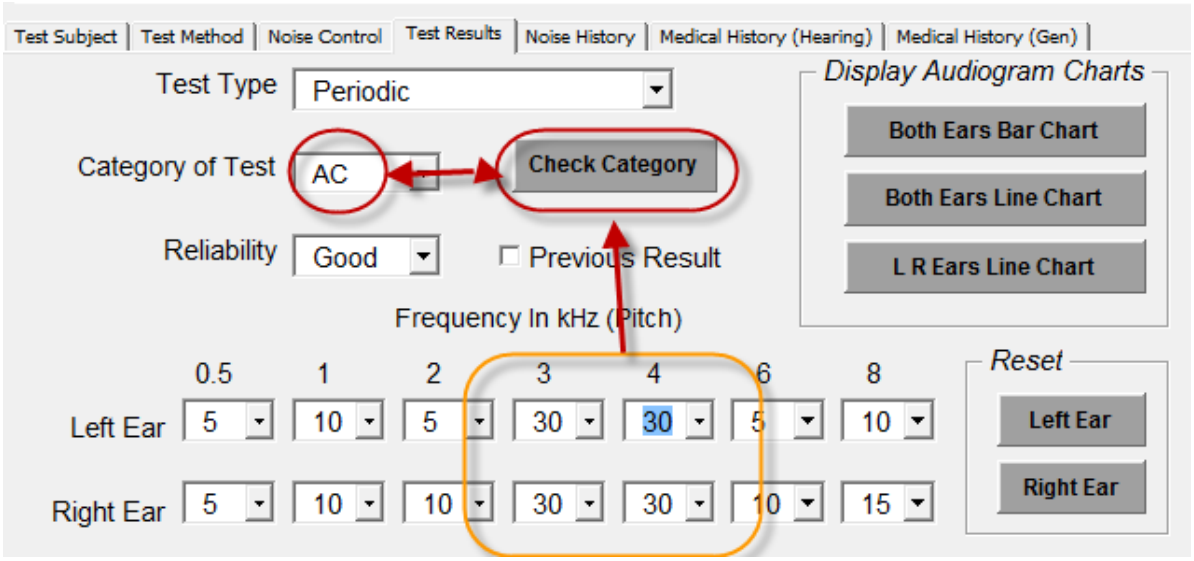
Once all the test results for left and right ears are entered for Test Type of 'Baseline' or '1st Time in Noisy Industry', the 'Check Category' button will be displayed.



Click the 'Check Category' button to calculate the 'Category of Test' value based on the test results entered for the left and right ears. The result of the calculation will be displayed in a message box.


WorkSafeBC Audiogram Session 1
Test results indicate an 'Abnormal' result
due to over the 25dB threshold at 0.5 KHz, 1 KHz or 2 KHz
in the left ear at 1 KHz(+30dB), 2 KHz(+40dB)
OK

When you click the 'OK' button of the message box, the calculated value will be inserted into the 'Category of Test' field. You can still override the calculated value.



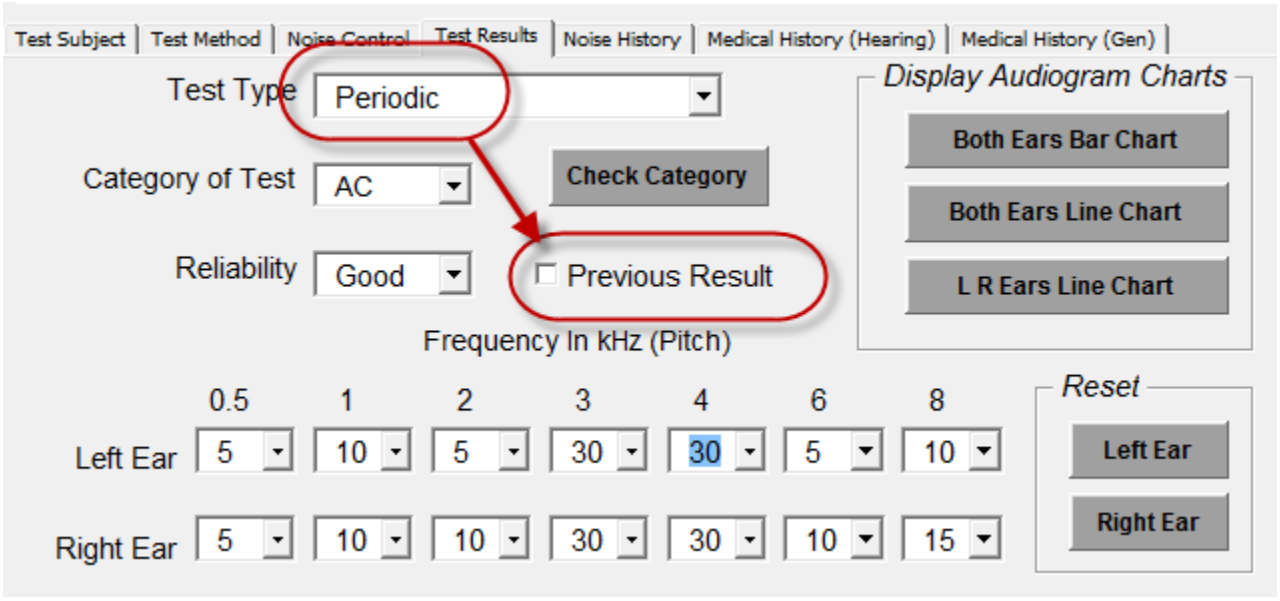
Looking up Previous Tests from the Long-Term Archive: Year to Year Comparisons

Note: for this to work, you must have your test subject's old test results stored in the 'Long-Term Archive' tab.

See the section 'Copying Archived Data To the 'Long-Term Archive' tab from a File' in Part 3 of this user manual for instructions on loading previous year test results into the 'Long-Term Archive' tab.

Using Previous Year Hearing Test Result Fields

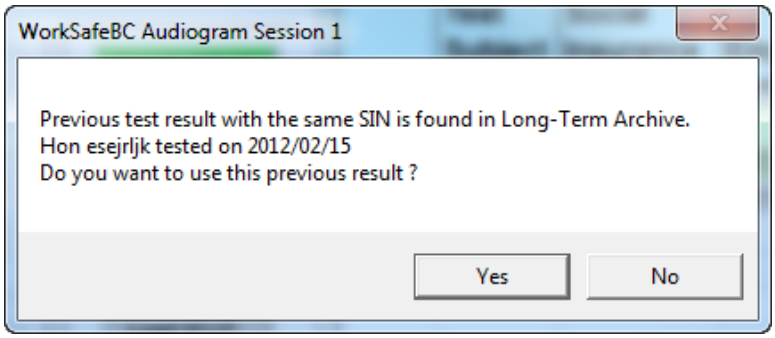
If the Test Type is 'Periodic', the 'Previous Result' checkbox is displayed:



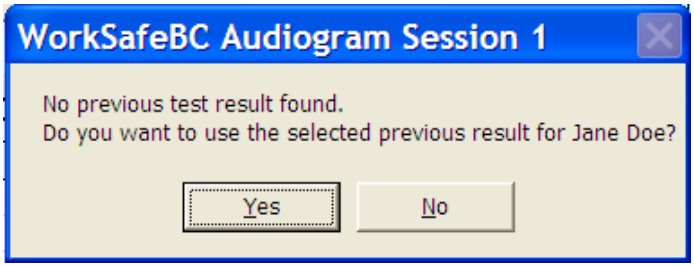
You can display the test results dropdown boxes for previous year by checking the 'Previous Result' checkbox.

The audiogram program will automatically search the 'Long-Term Archive' tab to locate a test with the following criteria and order.

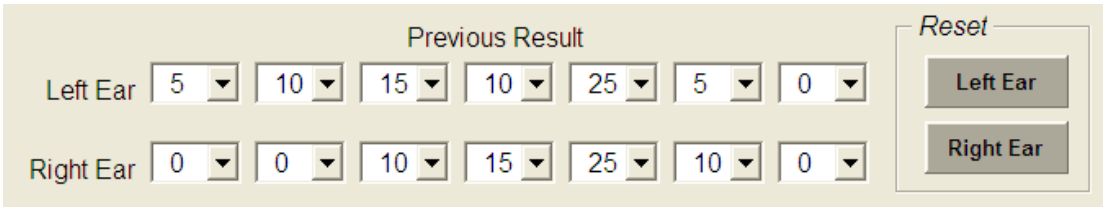
1. The first test with the same SIN and test year greater than test year of the current test or test year equal test year of the current test and test month greater than the test month of the current test.
2.
3. If no matching SIN found then the first test with the same first name, last name and birth year and birth month and test year greater than test year of the current test or test year equal test year of the current test and test month greater than the test month of the current test..


WorkSafeBC Audiogram Session 1
Previous test result with the same SIN is found in Long-Term Archive.
Hon esejrljk tested on 2012/02/15
Do you want to use this previous result ?
Yes
No

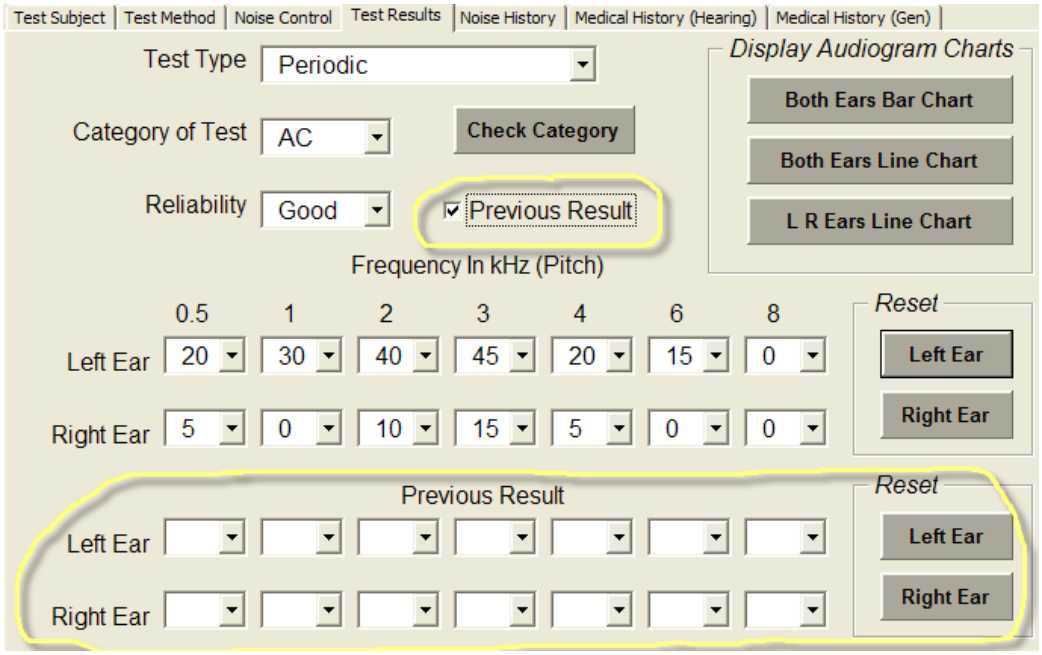
Finally, if no matching test is found in the 'Long-Term Archive' tab and a non blank test in the 'Long-Term Archive' tab is selected, you will be asked if you want to use the *selected* test in the Long-Term Archive to compare with the current test.


WorkSafeBC Audiogram Session 1
No previous test result found.
Do you want to use the selected previous result for Jane Doe?
Yes
No

Click the ‘OK’ button to continue and you will see the previous test results boxes filled in.



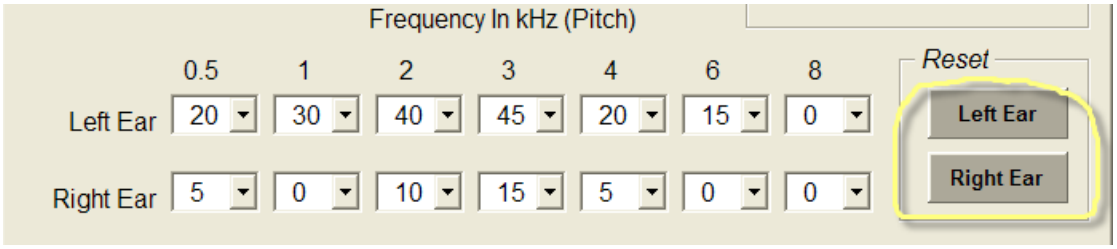
Click the ‘No’ button and the previous results box will be displayed for you to fill in manually.


Test Subject | Test Method | Noise Control | Test Results | Noise History | Medical History (Hearing) | Medical History (Gen)
Test Type Periodic
Category of Test AC
Check Category
Reliability Good
Previous Result
Frequency In kHz (Pitch)
0.5 1 2 3 4 6 8
Left Ear 20 30 40 45 20 15 0
Right Ear 5 0 10 15 5 0 0
Display Audiogram Charts
Both Ears Bar Chart
Both Ears Line Chart
L R Ears Line Chart
Reset
Left Ear
Right Ear
Previous Result
Left Ear
Right Ear
Reset
Left Ear
Right Ear

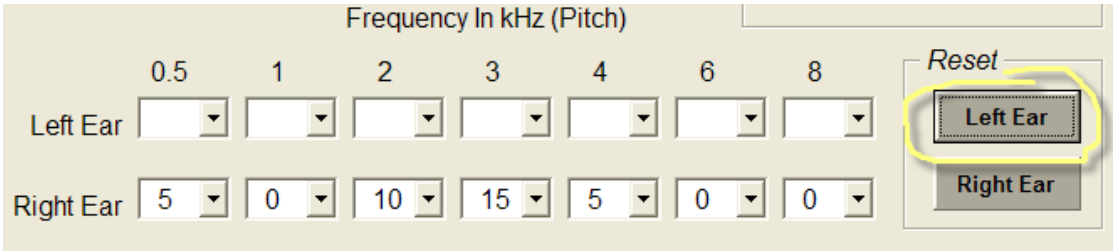
After you entered the previous year test results, you can click on the ‘Check Category’ button to calculate the ‘Category of Test’ value.

Reset Test Results Function

You can clear the test results for the left or right ears by clicking on the ‘Left Ear’ or ‘Right Ear’ reset button.

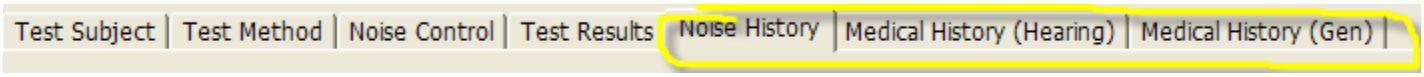


The test results for the left ear are cleared after clicking the ‘Left Ear’ reset button.



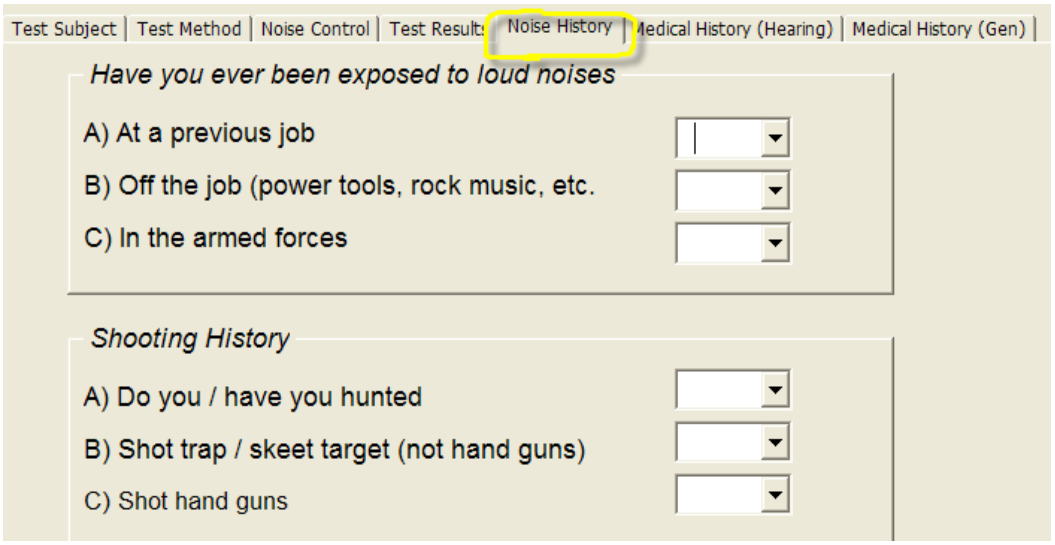
Optional Fields

The data fields in the 'Noise History', 'Medical History (Hearing)' and 'Medical History (Gen)' tabs are all optional fields.

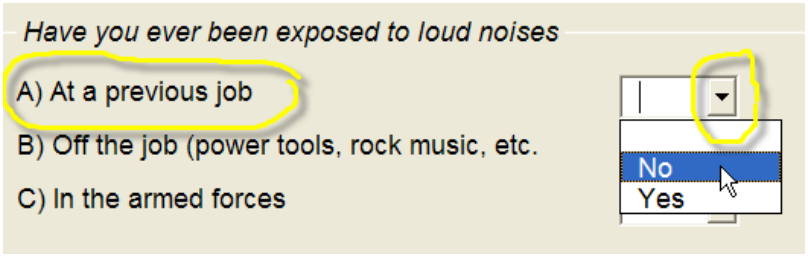


Entering 'Noise History' Info

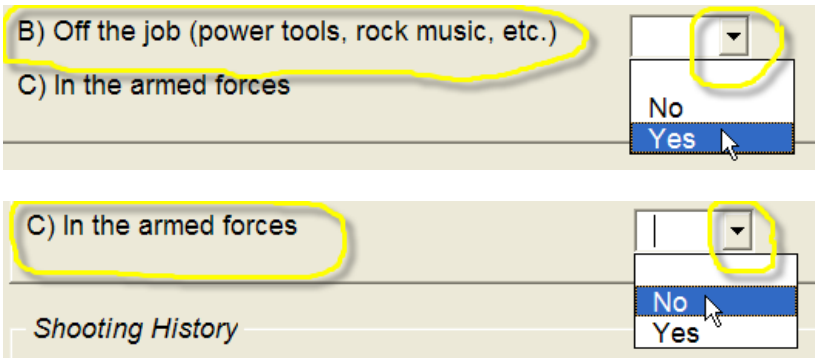
Click the 'Noise History' tab to display all the fields for noise history.

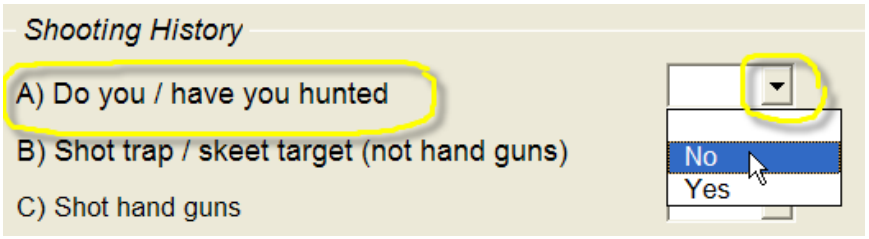

Test Subject
Test Method
Noise Control
Test Results
Noise History
Medical History (Hearing)
Medical History (Gen)
Have you ever been exposed to loud noises
A) At a previous job
B) Off the job (power tools, rock music, etc.
C) In the armed forces
Shooting History
A) Do you / have you hunted
B) Shot trap / skeet target (not hand guns)
C) Shot hand guns

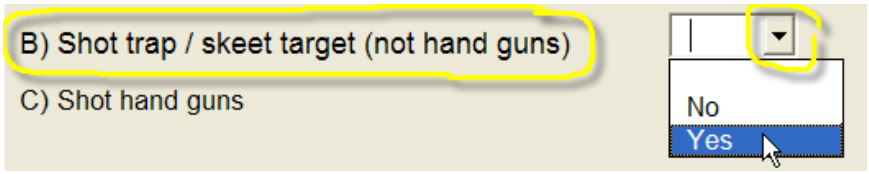
You can select one of the valid values from the dropdown list by clicking on the dropdown button on the right hand side and then select one of the values in the dropdown list.


Have you ever been exposed to loud noises
A) At a previous job
B) Off the job (power tools, rock music, etc.
C) In the armed forces
No
Yes

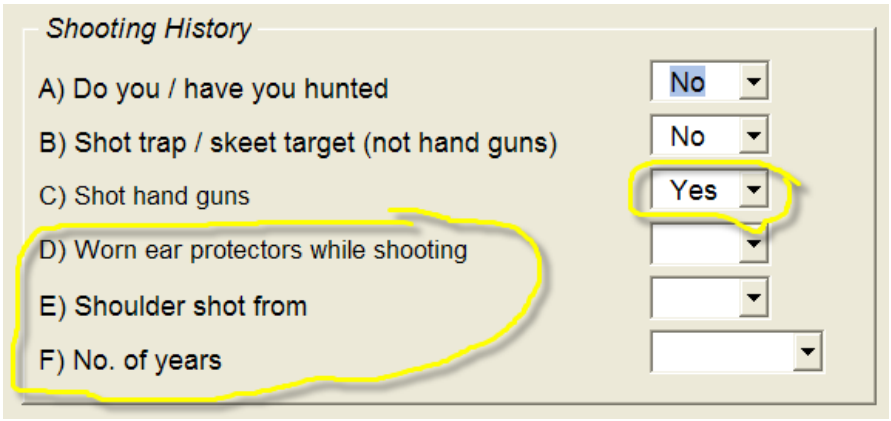
Have you ever been exposed to loud noises 'Off the job (power tools, rock music, etc.)'?

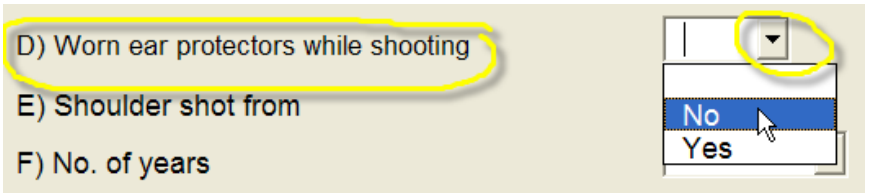


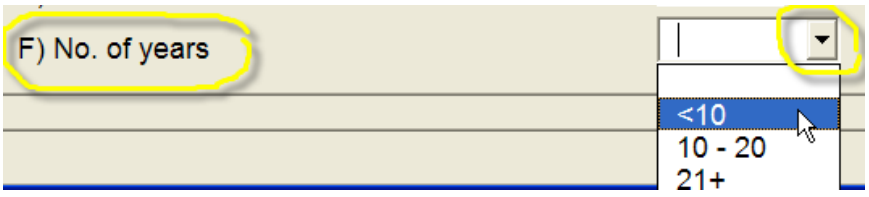




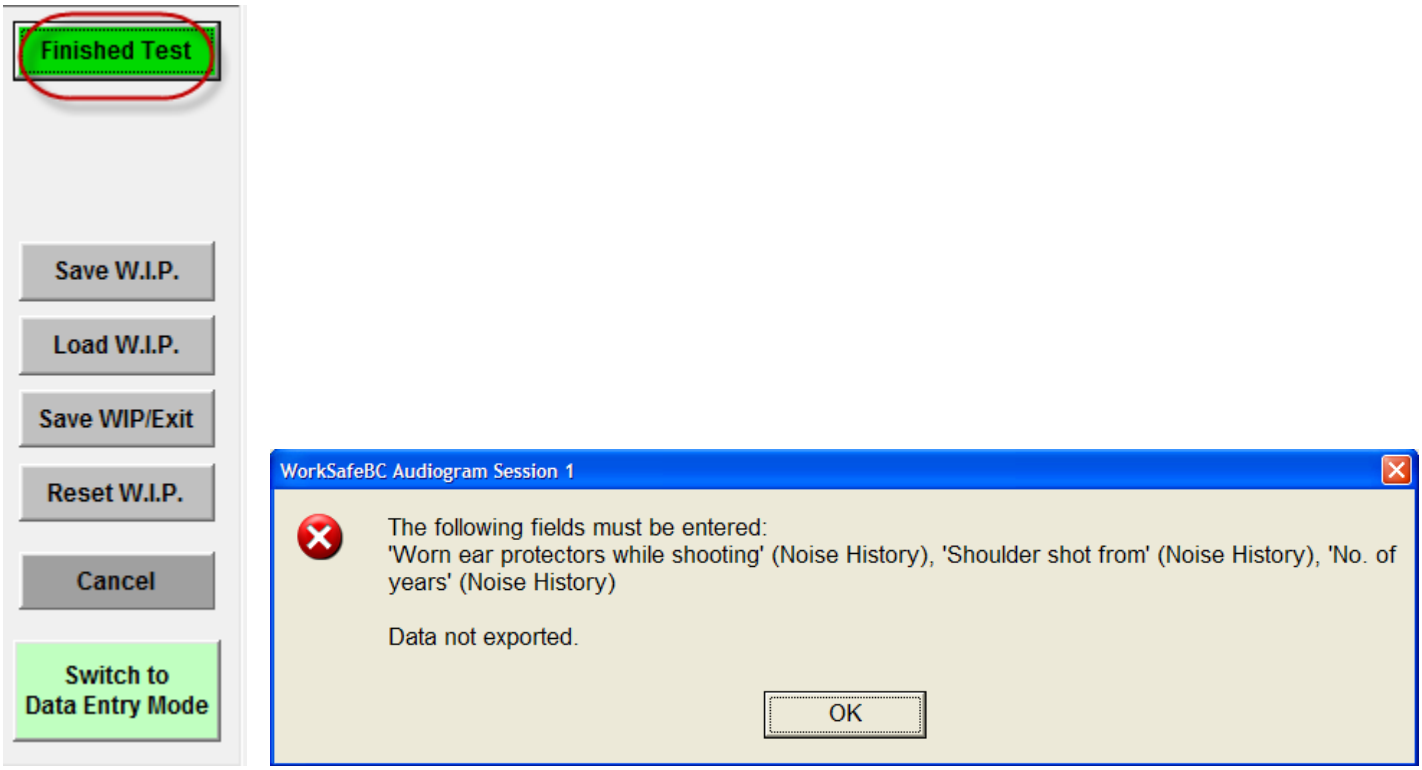
If any one of the 'Shooting History' field values is 'Yes', you will see the following additional fields displayed.





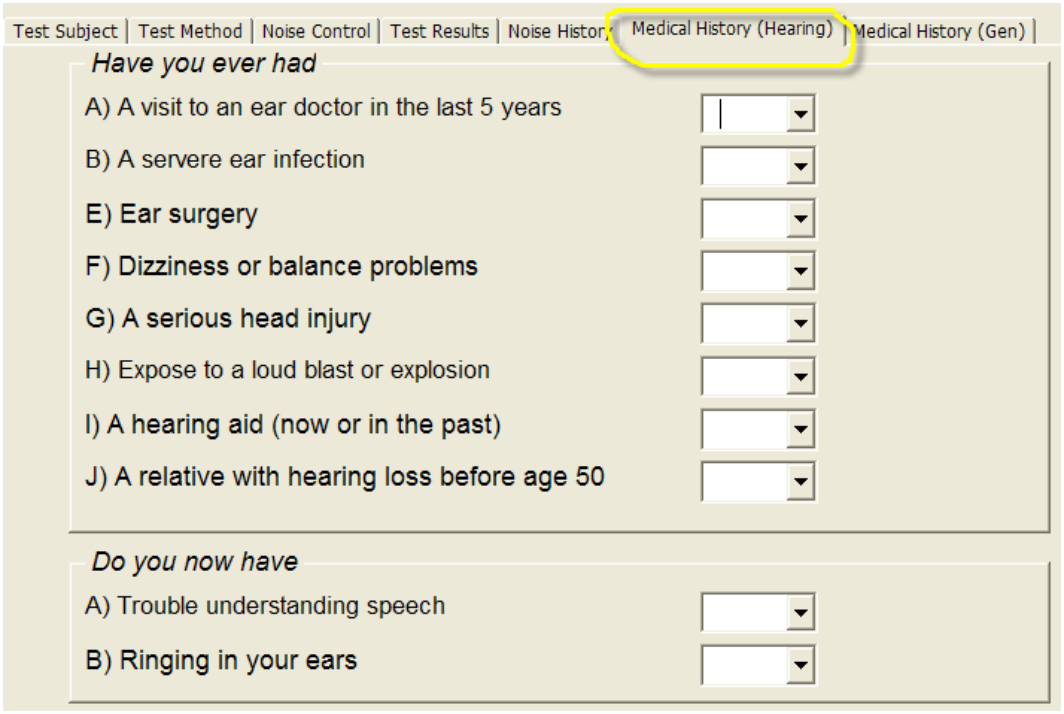


If any one of the ‘Shooting History’ field values is ‘Yes’ and you have not selected a value for the additional fields. You will see the following message box, if you click the ‘Finished Test’ button to save the hearing test. The message will indicate which fields should be filled in.



Entering 'Medical History (Hearing)' Info

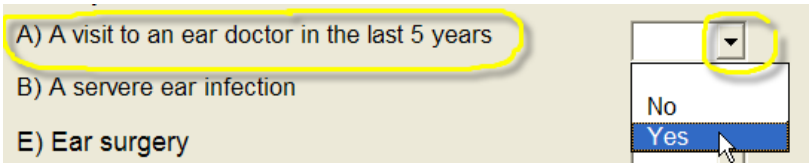
Click the 'Medical History (Hearing)' tab to display all the fields for hearing related medical history.


Test Subject
Test Method
Noise Control
Test Results
Noise History
Medical History (Hearing)
Medical History (Gen)
Have you ever had
A) A visit to an ear doctor in the last 5 years
B) A servere ear infection
E) Ear surgery
F) Dizziness or balance problems
G) A serious head injury
H) Expose to a loud blast or explosion
I) A hearing aid (now or in the past)
J) A relative with hearing loss before age 50
Do you now have
A) Trouble understanding speech
B) Ringing in your ears

You can select one of the valid values from the dropdown list by clicking on the dropdown button on the right hand side and then select one of the values in the dropdown list.

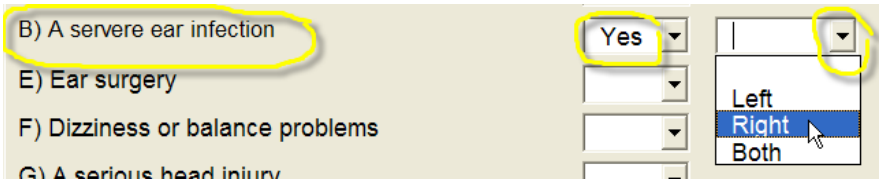
Have you ever had
A) A visit to an ear doctor in the last 5 years
B) A servere ear infection
E) Ear surgery
F) Dizziness or balance problems
G) A serious head injury
H) Expose to a loud blast or explosion
I) A hearing aid (now or in the past)
J) A relative with hearing loss before age 50

Have you ever had 'A visit to an ear doctor in the last 5 years'?

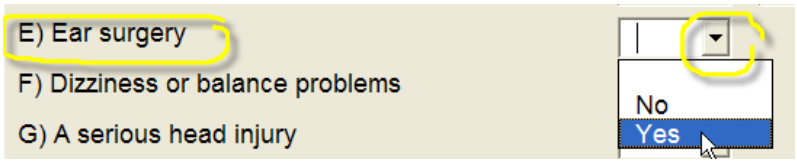


Have you ever had 'A severe ear infection'?

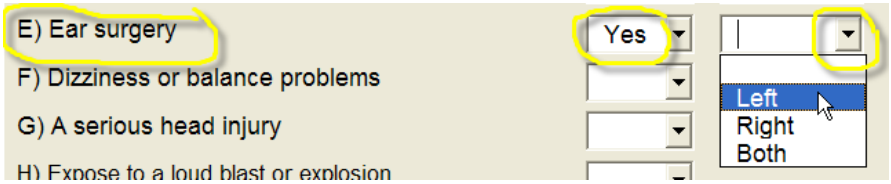
The location field will be displayed only if you selected 'Yes'.



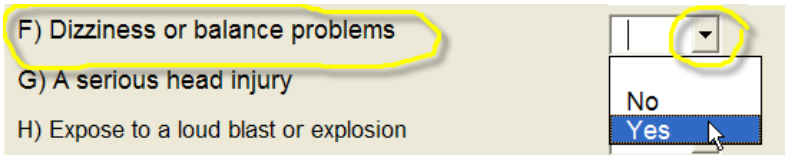
Have you ever had 'Ear surgery'?



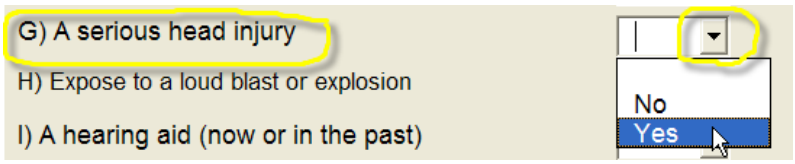
The location field will be displayed only if you selected 'Yes'.



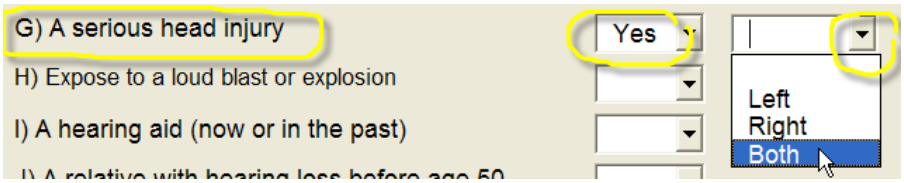
Have you ever had 'Dizziness or balance problems'?



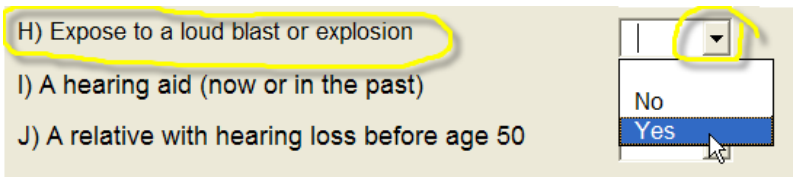
Have you ever had 'A serious head injury'?



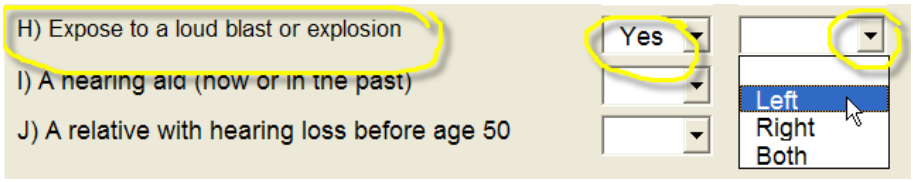
The location field will be displayed only if you selected 'Yes'.



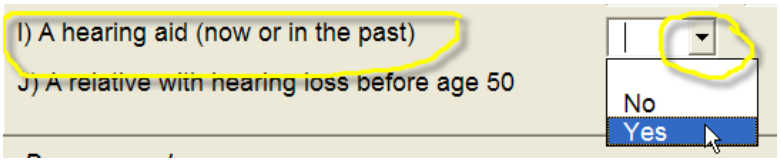
Have you ever had 'Expose to a loud blast or explosion'?



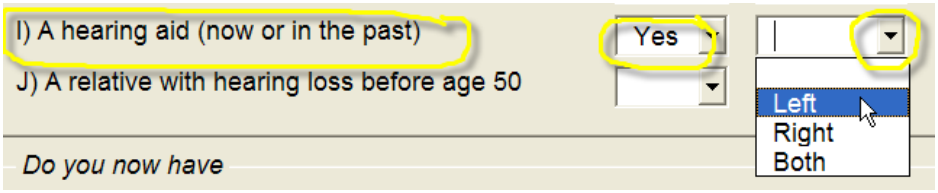
The location field will be displayed only if you selected 'Yes'.


H) Expose to a loud blast or explosion
I) A hearing aid (now or in the past)
J) A relative with hearing loss before age 50
Yes
Left
Right
Both

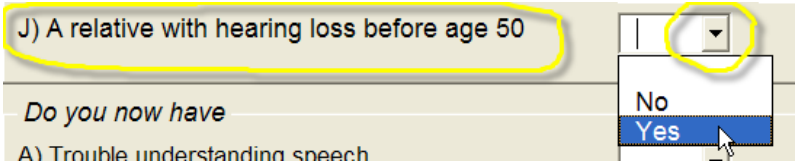
Have you ever had 'A hearing aid (now or in the past)'?



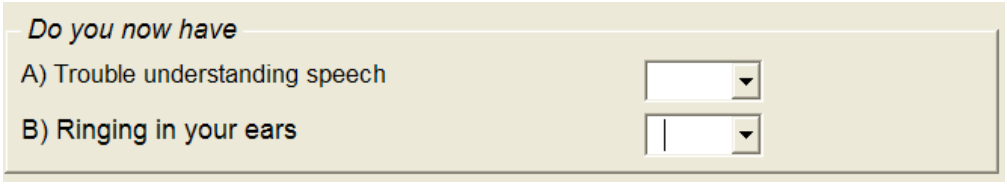
The location field will be displayed only if you selected 'Yes'.



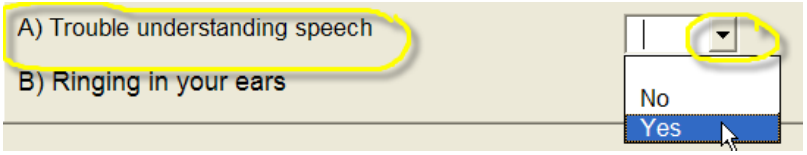
Have you ever had 'A relative with hearing loss before age 50'?



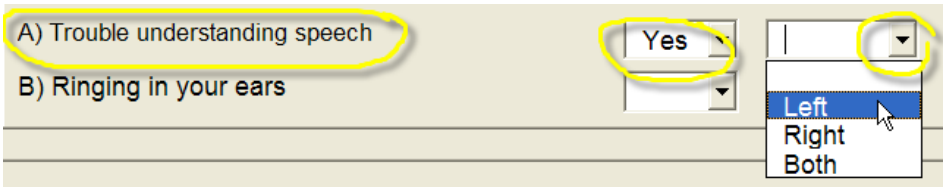
You can select one of the valid values from the dropdown list by clicking on the dropdown button on the right hand side and then select one of the values in the dropdown list.



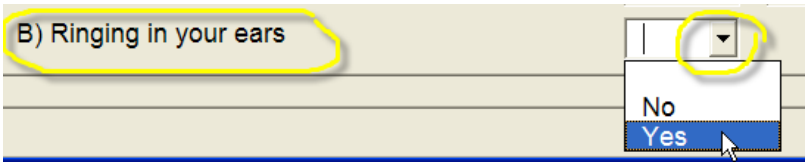
Do you now have 'Trouble understanding speech'?



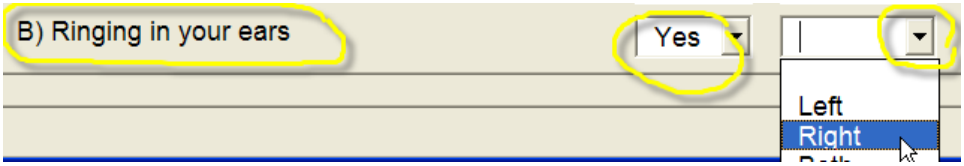
The location field will be displayed only if you selected 'Yes'.



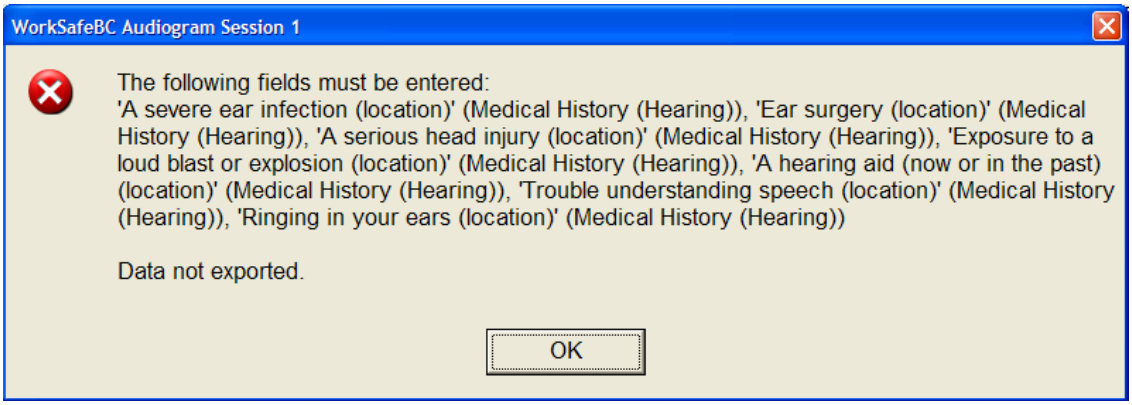
Do you now have 'Ringing in your ears'?



The location field will be displayed only if you selected 'Yes'.

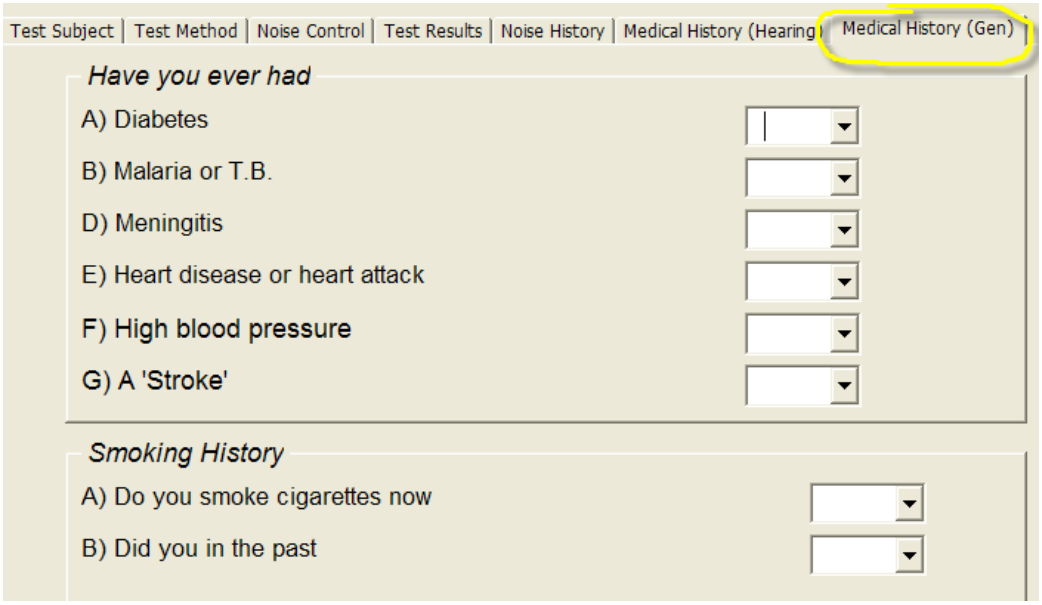


If you have selected 'Yes' for any of the above fields that have a related location field and you have not selected a value for the location. You will see the following message box, if you click the 'Finished Test' button to save the hearing test. The message will indicate which fields should be filled in.

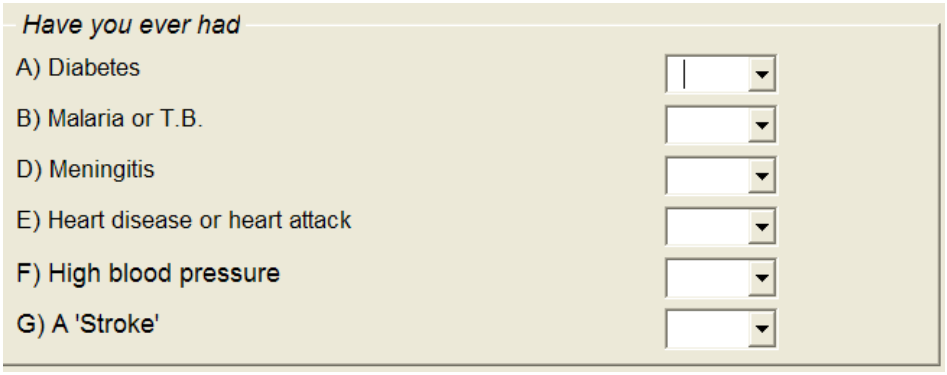

WorkSafeBC Audiogram Session 1
The following fields must be entered:
'A severe ear infection (location)' (Medical History (Hearing)), 'Ear surgery (location)' (Medical History (Hearing)), 'A serious head injury (location)' (Medical History (Hearing)), 'Exposure to a loud blast or explosion (location)' (Medical History (Hearing)), 'A hearing aid (now or in the past) (location)' (Medical History (Hearing)), 'Trouble understanding speech (location)' (Medical History (Hearing)), 'Ringing in your ears (location)' (Medical History (Hearing))
Data not exported.
OK

Entering 'Medical History (Gen)' Info

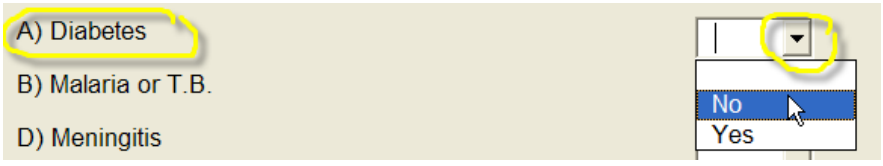
Click the 'Medical History (Gen)' tab to display all the fields for general medical history.



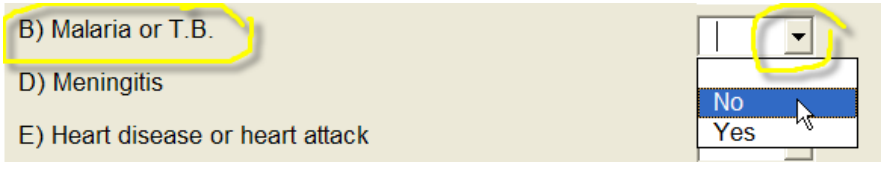
You can select one of the valid values from the dropdown list by clicking on the dropdown button on the right hand side and then select one of the values in the dropdown list.



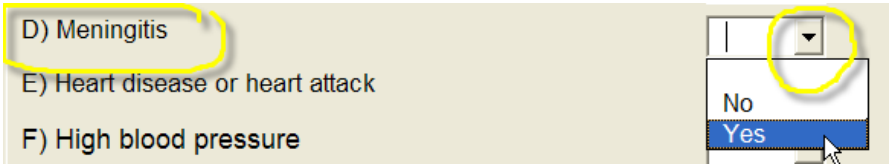
Have you ever had 'Diabetes'?



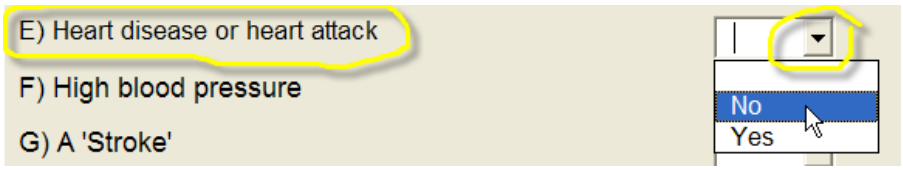
Have you ever had '



Have you ever had ‘



Have you ever had ‘



Have you ever had ‘

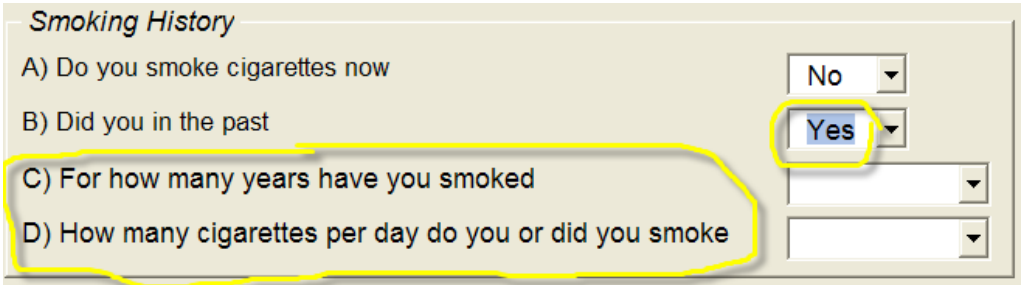
Have you ever had ‘A ‘Stroke’’?

You can select one of the valid values from the dropdown list by clicking on the dropdown button on the right hand side and then select one of the values in the dropdown list.

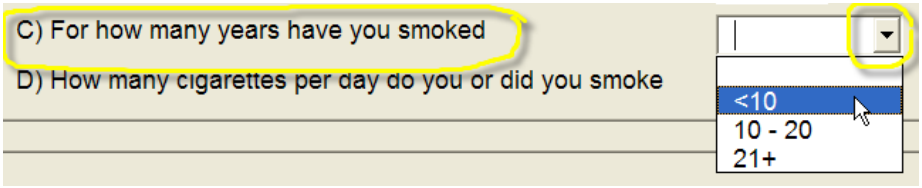
‘Do you smoke cigarettes now’?

'Did you in the past'?

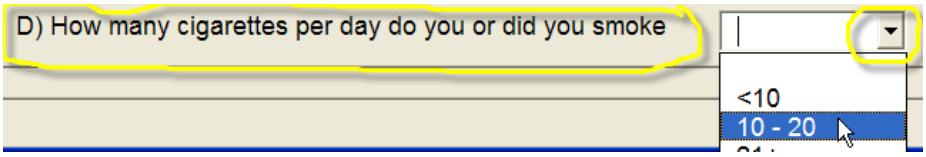
If any one of the 'Smoking History' field values is 'Yes', you will see the following additional fields displayed.


Smoking History
A) Do you smoke cigarettes now
No
B) Did you in the past
Yes
C) For how many years have you smoked
D) How many cigarettes per day do you or did you smoke

'For how many years have you smoked'?

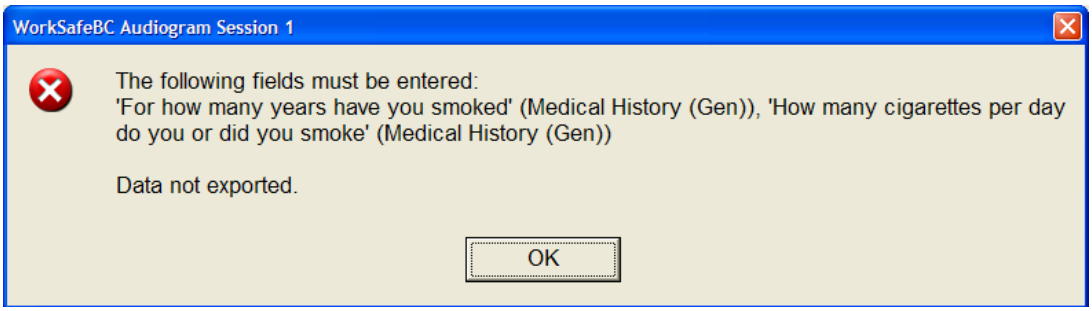


'How many cigarettes per day do you or did you smoke'?



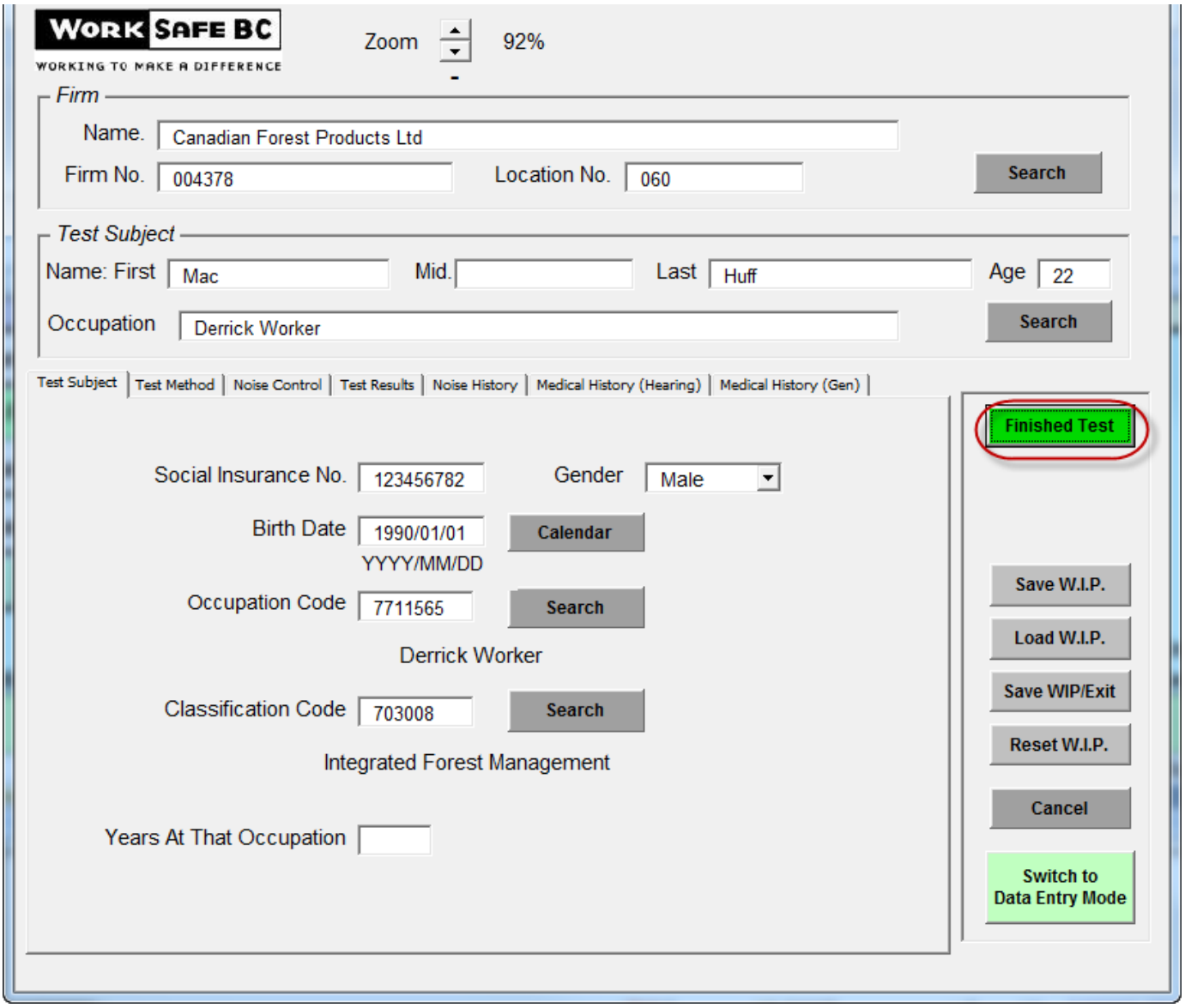
If one or both of the first two 'Smoking History' field values is 'Yes' and you have not selected a value for the additional fields. You will see the following message box, if you click the 'Finished Test' button to save the hearing test. The message will indicate which fields should be filled in.

Finished Test
Save W.I.P.
Load W.I.P.
Save WIP/Exit
Reset W.I.P.
Cancel
Switch to Data Entry Mode


WorkSafeBC Audiogram Session 1
The following fields must be entered:
'For how many years have you smoked' (Medical History (Gen)), 'How many cigarettes per day do you or did you smoke' (Medical History (Gen))
Data not exported.
OK

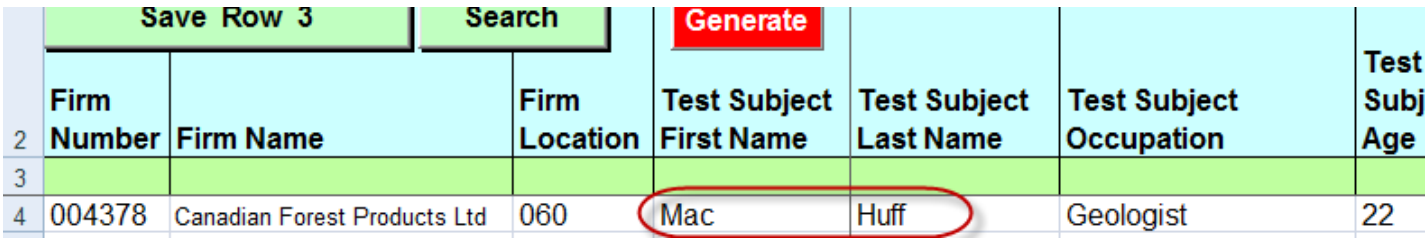
Saving a Hearing Test Entered In Form Mode

Once all the data for a hearing test is entered into the audiogram form. You can save the hearing test result by clicking on the '*Finished Test*' button to save the data to the 'Audiogram Data Entry' tab.



Effect of Clicking "Finished Test"

When you click the 'Finished Test' button, all the data in the audiogram form is validated again. If there is no error, the hearing test result you have just entered is saved in the next empty row below row 3 of the 'Audiogram Data Entry', and some of the fields in the audiogram form will be reset to blank so that you can start entering the next form.

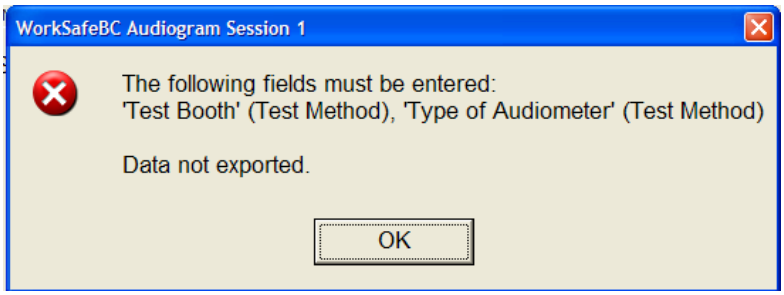


Validations performed when a Hearing Test is saved

These validations are performed before a hearing test result is saved.

Mandatory Field Validation

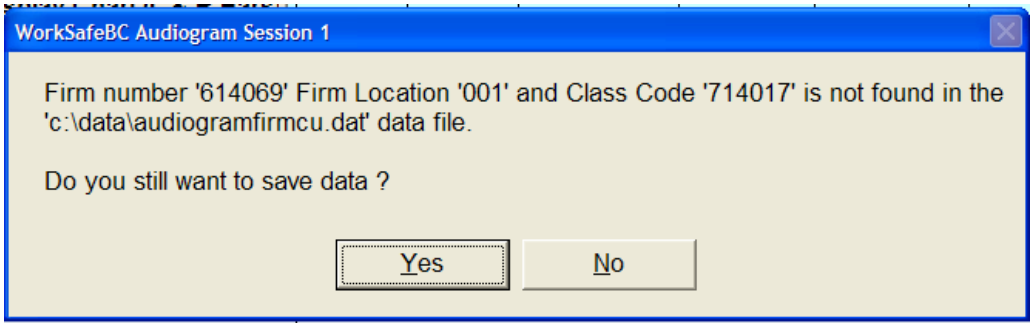
You will see this error message if any mandatory fields are not entered.


WorkSafeBC Audiogram Session 1
The following fields must be entered:
'Test Booth' (Test Method), 'Type of Audiometer' (Test Method)
Data not exported.
OK

Firm and Classification Code Validation

If the 'c:\WorkSafeBC Audiogram\Data\audiogramfirmcu.dat' file that contains all the firm number, firm location, firm name and classification code combinations is present, then the firm number, firm location, firm name and classification code combination in this hearing test will be checked against the file.

If the entered combination does not exist in the file, the following warning message is displayed. However, you can still save the hearing test if you are sure the combination you entered is valid by clicking on the 'Yes' button. If the entered combination is incorrect, then click on the 'No' button to return to the 'Audiogram Data Entry' tab without saving the hearing test and correct the incorrect data.

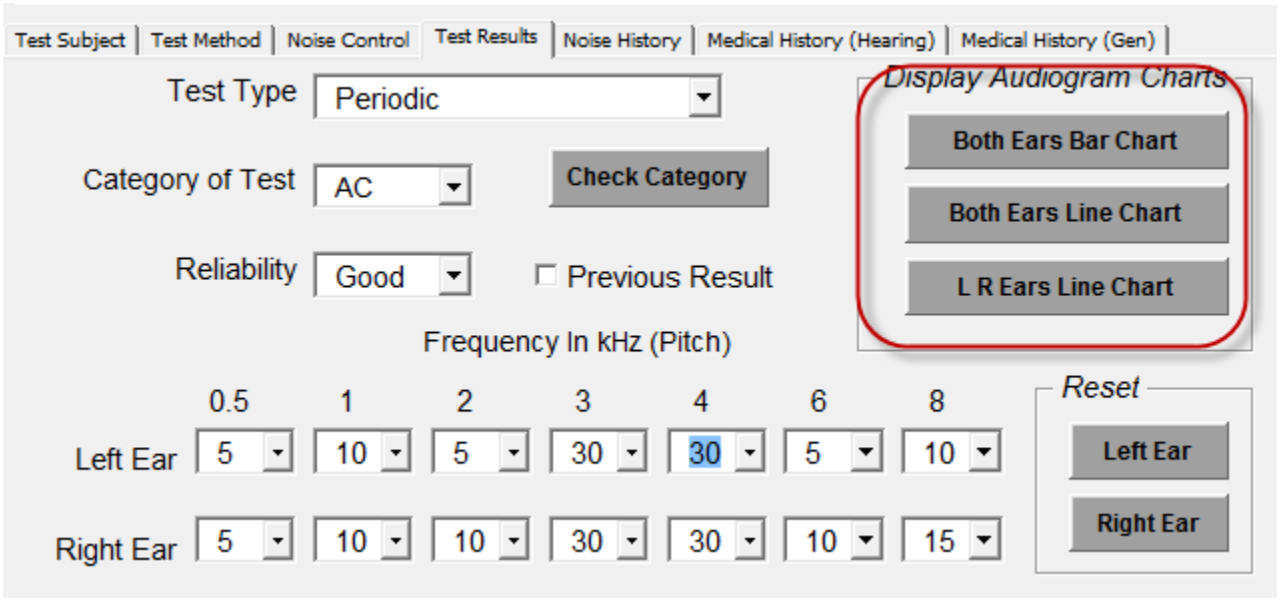

WorkSafeBC Audiogram Session 1
Firm number '614069' Firm Location '001' and Class Code '714017' is not found in the 'c:\data\audiogramfirmcu.dat' data file.
Do you still want to save data ?
Yes
No

If you see a message like this, check your sources. If your sources are valid, then let PDICON@worksafebc.com know to change our files.

If the 'c:\WorkSafeBC Audiogram\Data\audiogramfirmcu.dat' file is not setup, then you will not see the above warning message, and you are at risk of sending in invalid data; having the **AudiogramFirmCU** can save you work.

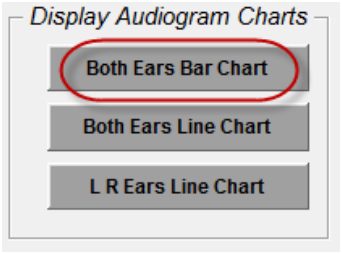
Displaying Audiogram Chart in Form Mode

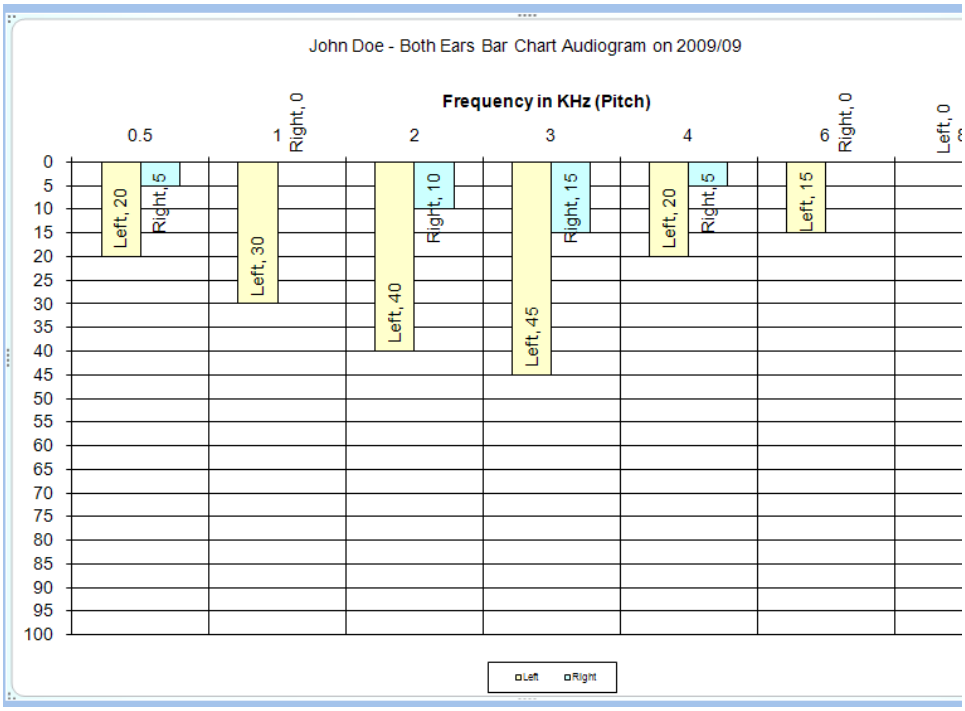
You can display the test results in three different types of audiogram chart in the 'Test Results' tab.



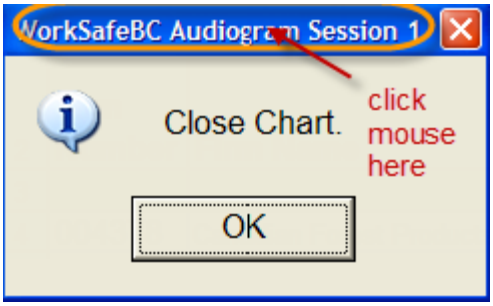
Display Both Ears Bar Chart

Click on the 'Both Ears Bar Chart' button will display the test results for both ears side by side in the same bar chart.



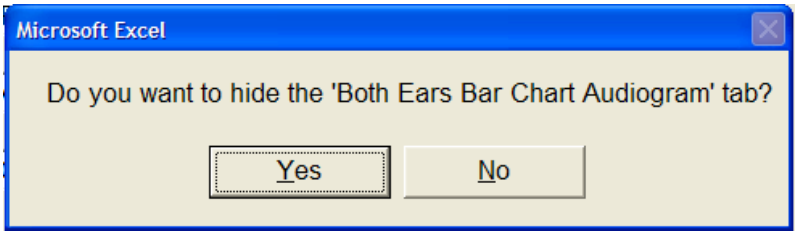


You will also see the following message box displayed on top of the chart, you can move the message box to one side when you review the chart. You can move the message box by placing the mouse pointer to the top of the box as shown in the following screen shot. Then hold down the left mouse button and drag the box to the side.



When you have finished reviewing the chart, click the 'OK' button to close the chart window.

Next you will be asked if you want to hide the 'Both Ears Bar Chart Audiogram' tab which is the tab that contains the chart you have just reviewed.

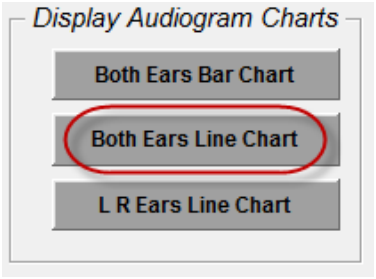


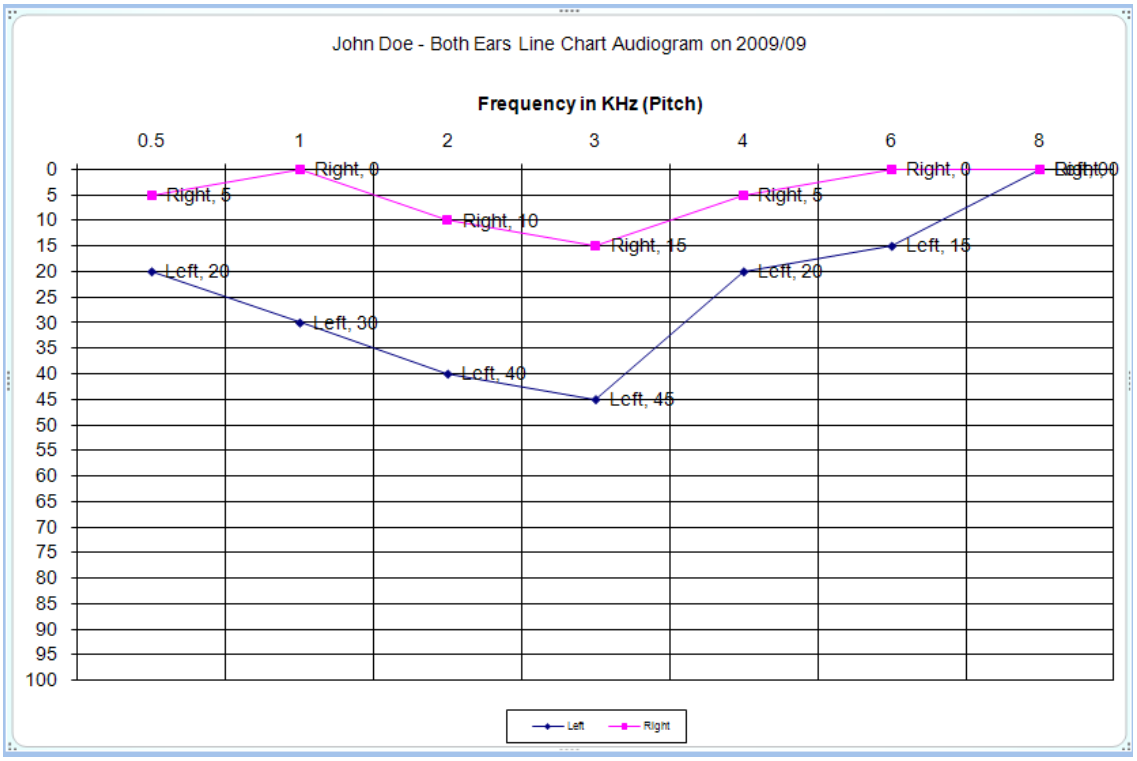
Click 'Yes' if you want to review or print chart later. Otherwise click 'No' to hide the tab.

See the section 'Print Audiogram Chart In Form Mode' in Part 2 of the user manual for detail instructions of printing the chart in the 'Both Ears Bar Chart Audiogram' tab.

Displaying the Both Ears Line Chart

Click on the 'Both Ears Line Chart' button will display the test results for both ears in the same line chart.



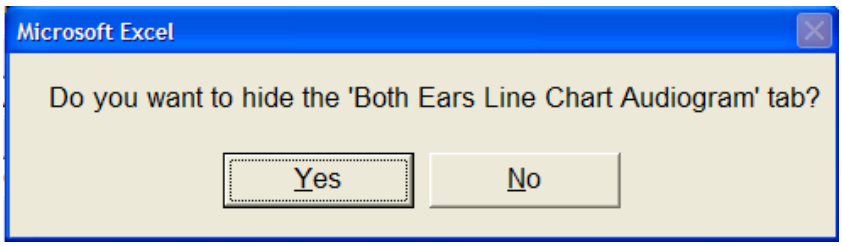


You will also see the following message box displayed on top of the chart, you can move the message box to one side when you review the chart. You can move the message box by placing the mouse pointer to the top of the box as shown in the following screen shot. Then hold down the left mouse button and drag the box to the side.

When you have finished reviewing the chart, click the 'OK' button to close the chart window.

Next you will be asked if you want to hide the 'Both Ears Bar Chart Audiogram' tab which is the tab that contains the chart you have just reviewed.

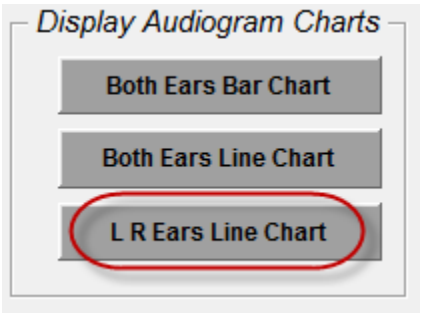
Click 'Yes' if you want to review or print the chart later. Otherwise click 'No' to hide the tab.

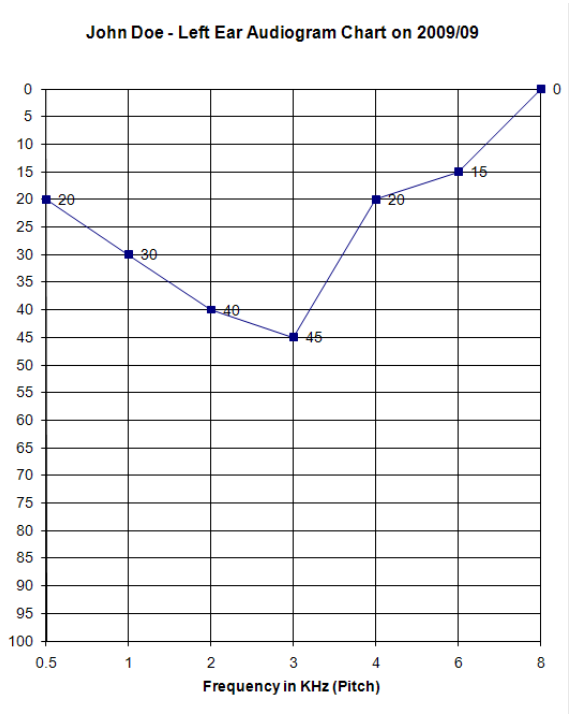


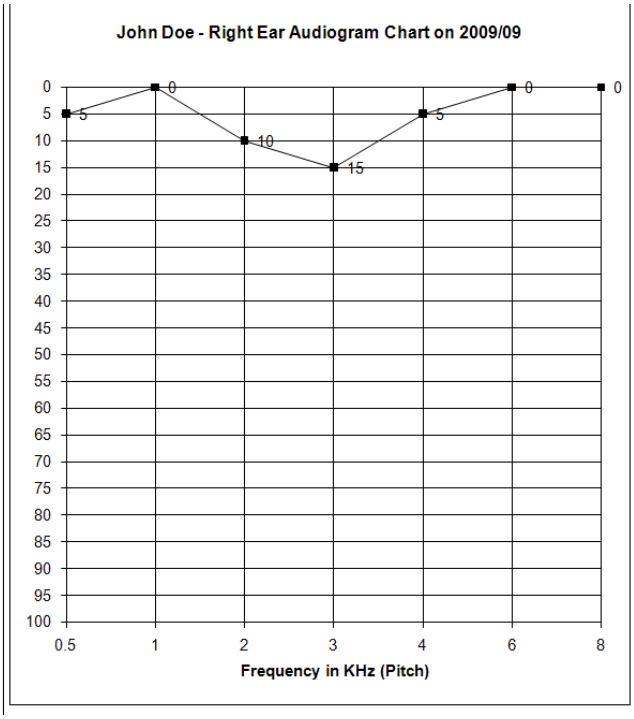
See the section 'Print Audiogram Chart In Form Mode' in Part 2 of the user manual for detail instructions of printing the chart in the 'Both Ears Bar Line Audiogram' tab.

Displaying the L-R Ears Line Chart

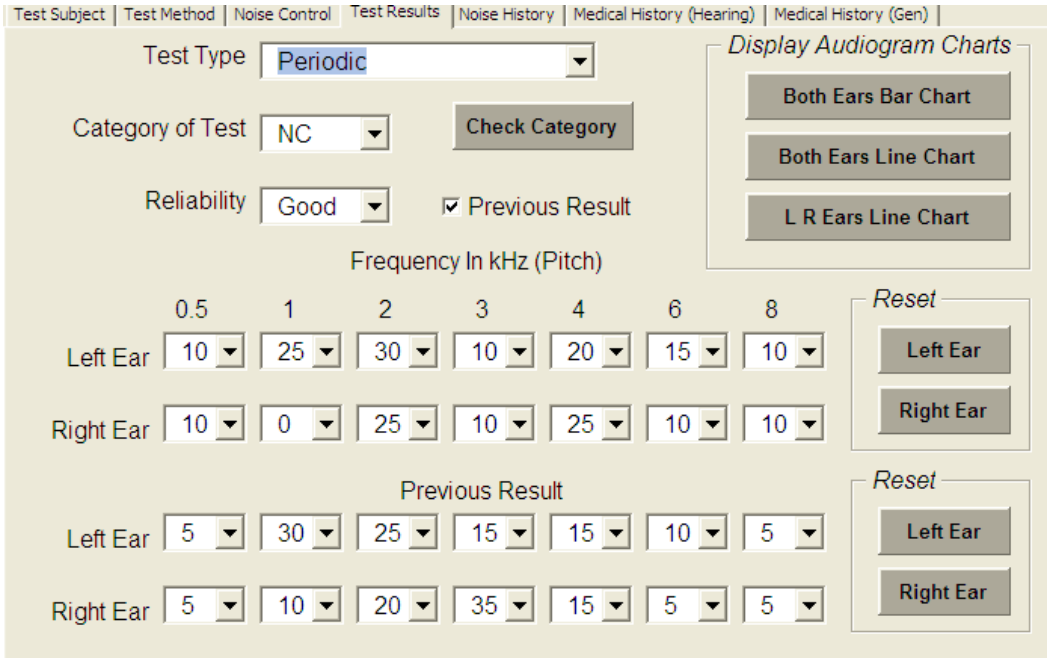
Click on the 'L R Ears Line Chart' button will display the test results for both ears in two separate line charts.



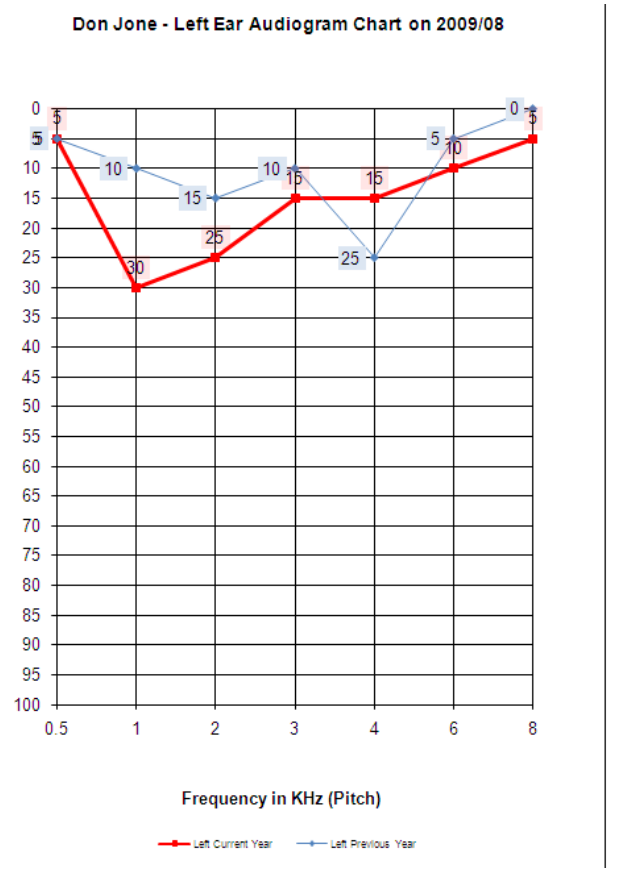


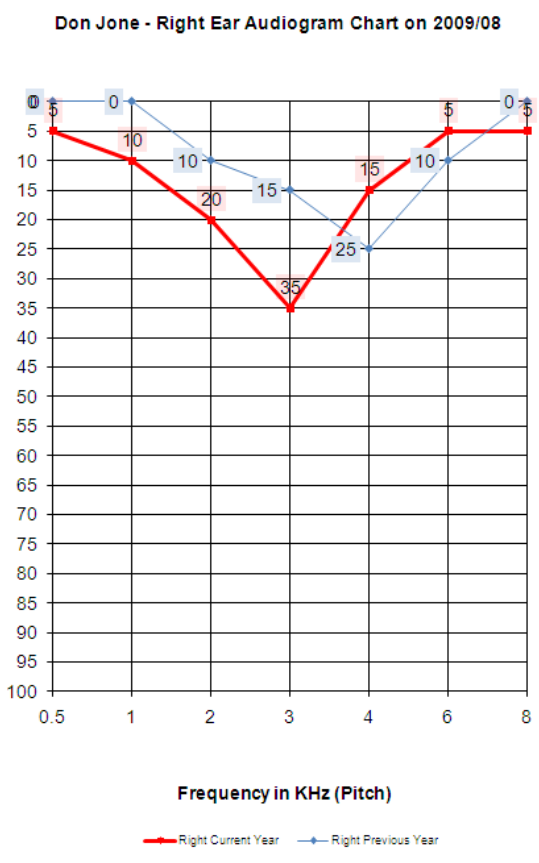


If the test type is 'Periodic' and the 'Previous Result' fields are filled in.


Test Subject | Test Method | Noise Control | Test Results | Noise History | Medical History (Hearing) | Medical History (Gen)
Test Type
Periodic
Category of Test
NC
Check Category
Reliability
Good
Previous Result
Display Audiogram Charts
Both Ears Bar Chart
Both Ears Line Chart
L R Ears Line Chart
Frequency In kHz (Pitch)
0.5 1 2 3 4 6 8
Left Ear 10 25 30 10 20 15 10
Right Ear 10 0 25 10 25 10 10
Reset
Left Ear
Right Ear
Previous Result
Left Ear 5 30 25 15 15 10 5
Right Ear 5 10 20 35 15 5 5
Reset
Left Ear
Right Ear

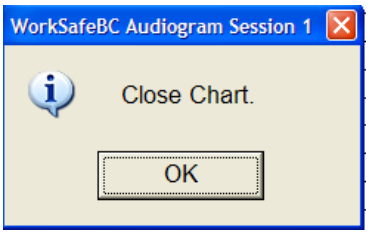
You will see the charts for the current year and previous year hearing test results.





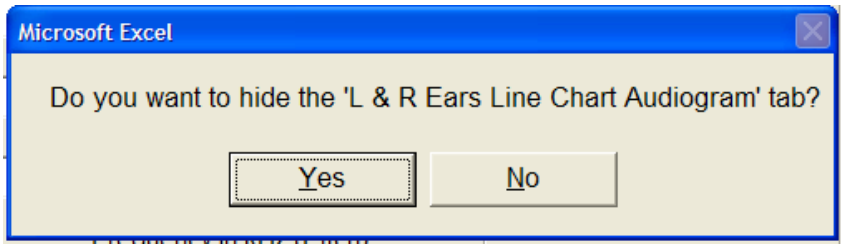
You will also see the following message box displayed on top of the chart, you can move the message box to one side when you review the chart. Move the message box by placing the mouse pointer to the top of the box as shown in the following screen shot. Then hold down the left mouse button and drag the box to the side.

When you have finished reviewing the chart, click the 'OK' button to close the chart window.



Next you will be asked if you want to hide the 'L & R Ears Line Chart Audiogram' tab which is the tab that displays the chart you have just reviewed.

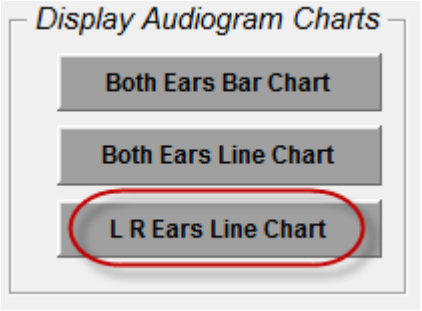
Click 'Yes' if you want to review or print the chart later. Otherwise click 'No' to hide the tab.



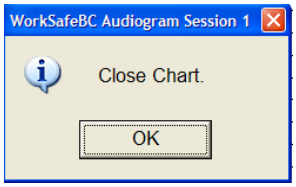
See the next section 'Print Audiogram Chart In Form Mode' in Part 2 of the user manual for detail instructions of printing the chart in the 'L & R Ears Line Chart Audiogram' tab.

Printing an Audiogram Chart from Form Mode

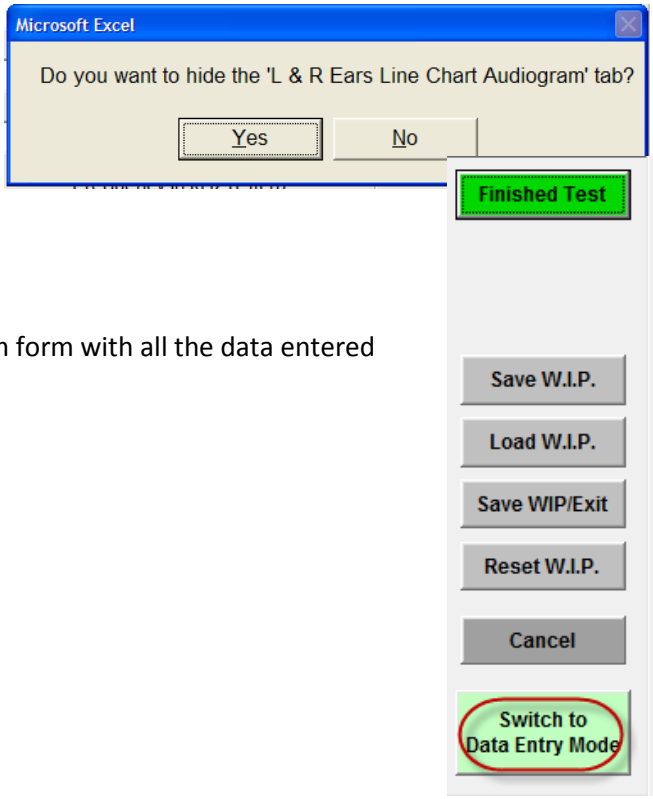
The steps to print each of the three types of audiogram chart in form mode are the same. Here we will use the 'L R Ears Line Chart' as an example.



Display the chart you want to print by clicking the 'L R Ears Line Chart' button.



Once you have confirmed it is the chart you want to print. Click the 'OK' button to close the chart, then

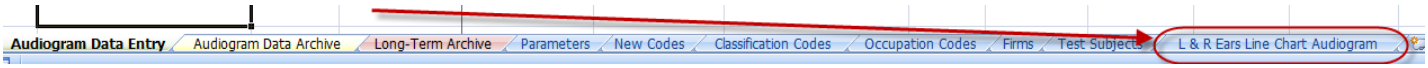


Click the 'No' button when you are asked if you want to hide the 'L & R Ears Line Chart Audiogram' tab.

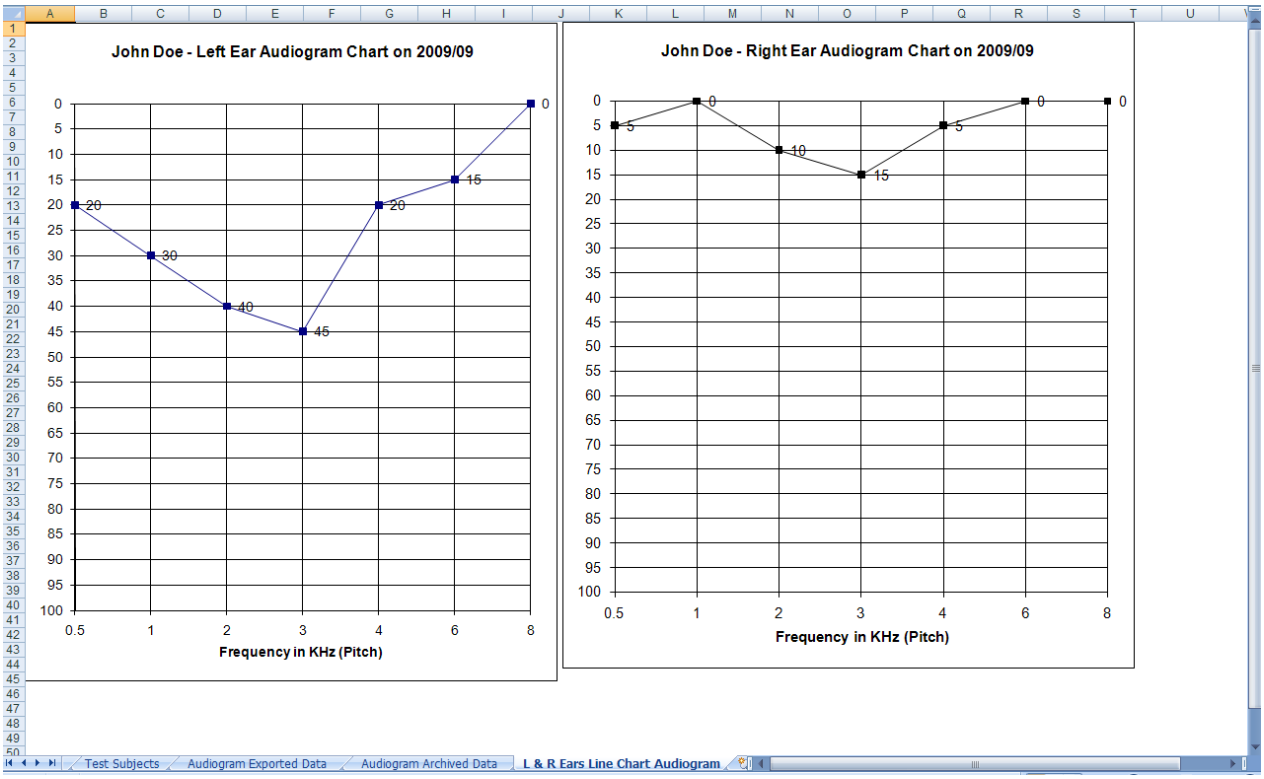
When you return to the audiogram form, click the 'Data Entry Mode' button to switch to the 'Audiogram Data Entry' tab with all the data you have entered into the audiogram form.

Click on the 'Form Mode' button to switch back to the audiogram form with all the data entered after you printed the audiogram chart.

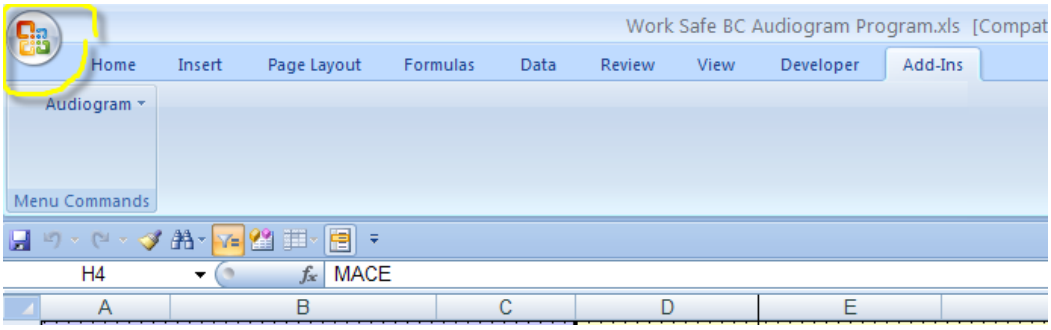
Next display the 'L & R Ears Line Chart Audiogram' tab by clicking the 'L & R Ears Line Chart Audiogram' tab at the bottom of the EXCEL window.



You will see the chart you would like to print:

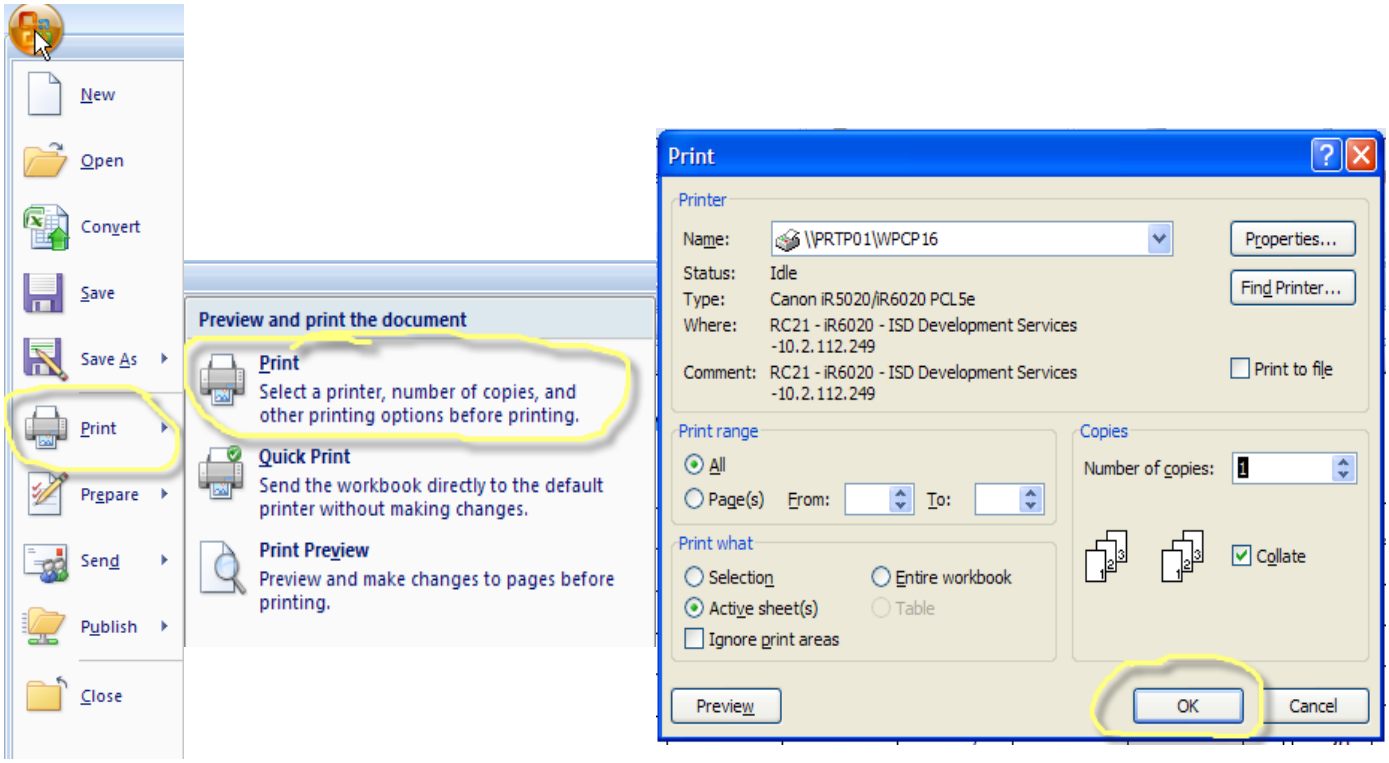

John Doe - Left Ear Audiogram Chart on 2009/09
Frequency in KHz (Pitch)
John Doe - Right Ear Audiogram Chart on 2009/09
Frequency in KHz (Pitch)
Test Subjects
Audiogram Exported Data
Audiogram Archived Data
L & R Ears Line Chart Audiogram

Click the 'Office' button at the top left hand corner of the EXCEL window, or the "File" option in Excel 2010



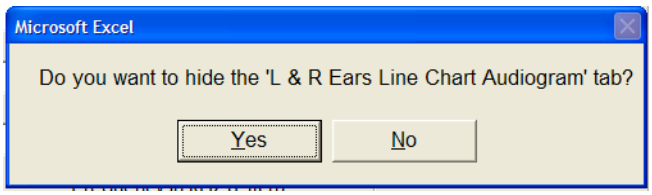
Select the 'Print' option to bring up the 'Print' window.

Your printer name will be different because you will have a different printer setup.



Click the 'OK' button to print the audiogram chart.

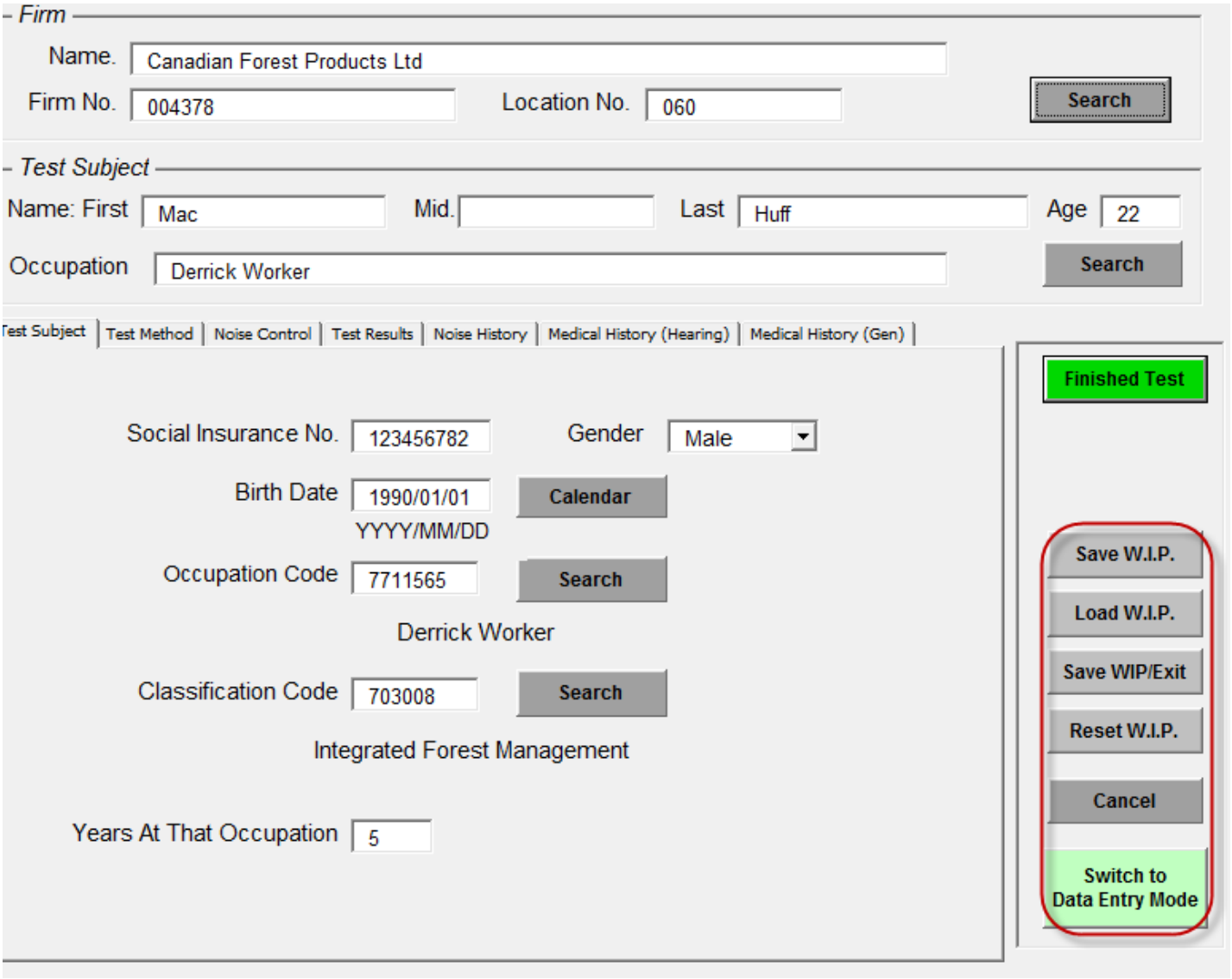
When you move away from the 'L & R Ears Line Chart Audiogram' tab by clicking on any other tab in the audiogram program, you will be asked if you want to hide the 'L & R Ears Line Chart Audiogram' tab.



Click the 'Yes' button to hide the 'L & R Ears Line Chart Audiogram' tab. You would reply "no" only if you want to print it later.

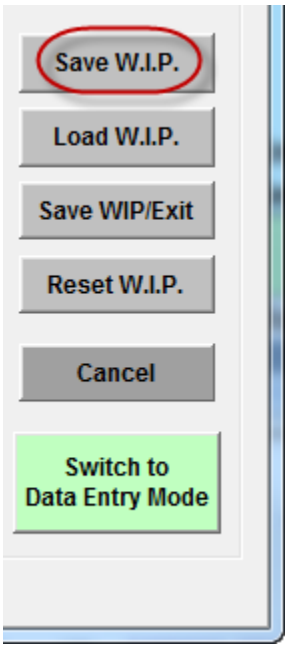
Audiogram Form special actions

There are six buttons on the audiogram form that help you save work in progress.



Saving Audiogram Data between Sessions

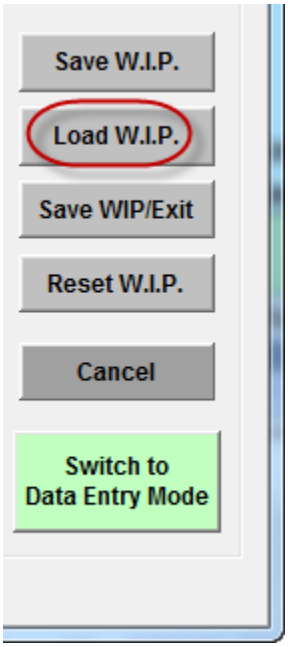
The 'Save W.I.P.' button saves all the audiogram data in the audiogram form that have been entered at that point into a temporary area. This allows you to save the data in a session and then restore the session anytime and continue the data entry.



Reloading saved Audiogram Data between Sessions

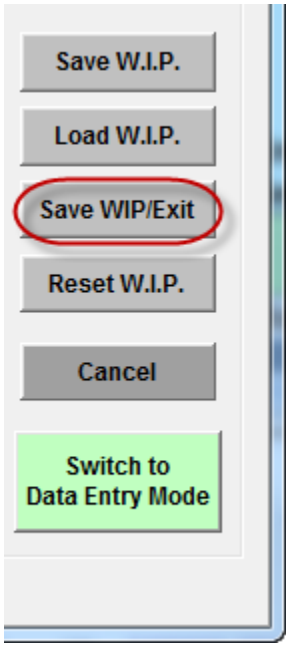
The 'Load W.I.P. button loads the data saved during the last time the 'Save W.I.P.' button was clicked back into the audiogram form.

Tip: you can use this to save a set of data like a template and load a prefilled set of WIP to save yourself typing.



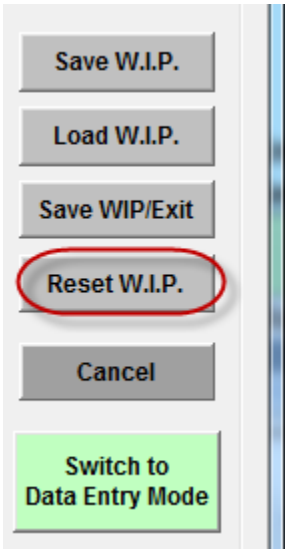
Saving Data and Exiting Audiogram Form

The 'Save W.I.P./Exit' button will save all the audiogram data in the audiogram form that have been entered at that point into a temporary area before closing the audiogram form.



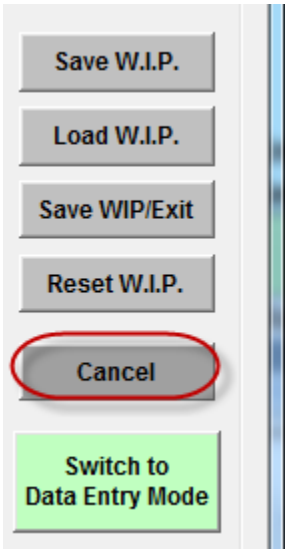
Resetting W.I.P. in the Audiogram Form

The 'Reset All' button will clear all the WIP fields in the audiogram form.



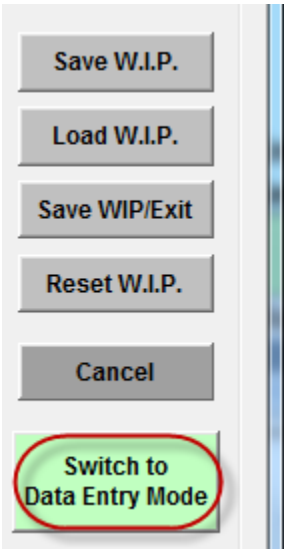
Cancel

The 'Cancel' button will close the audiogram form without saving the data in the audiogram form that have been entered at that point into a temporary area. Data that have been entered after the last time the 'Save All' button was clicked will be lost.



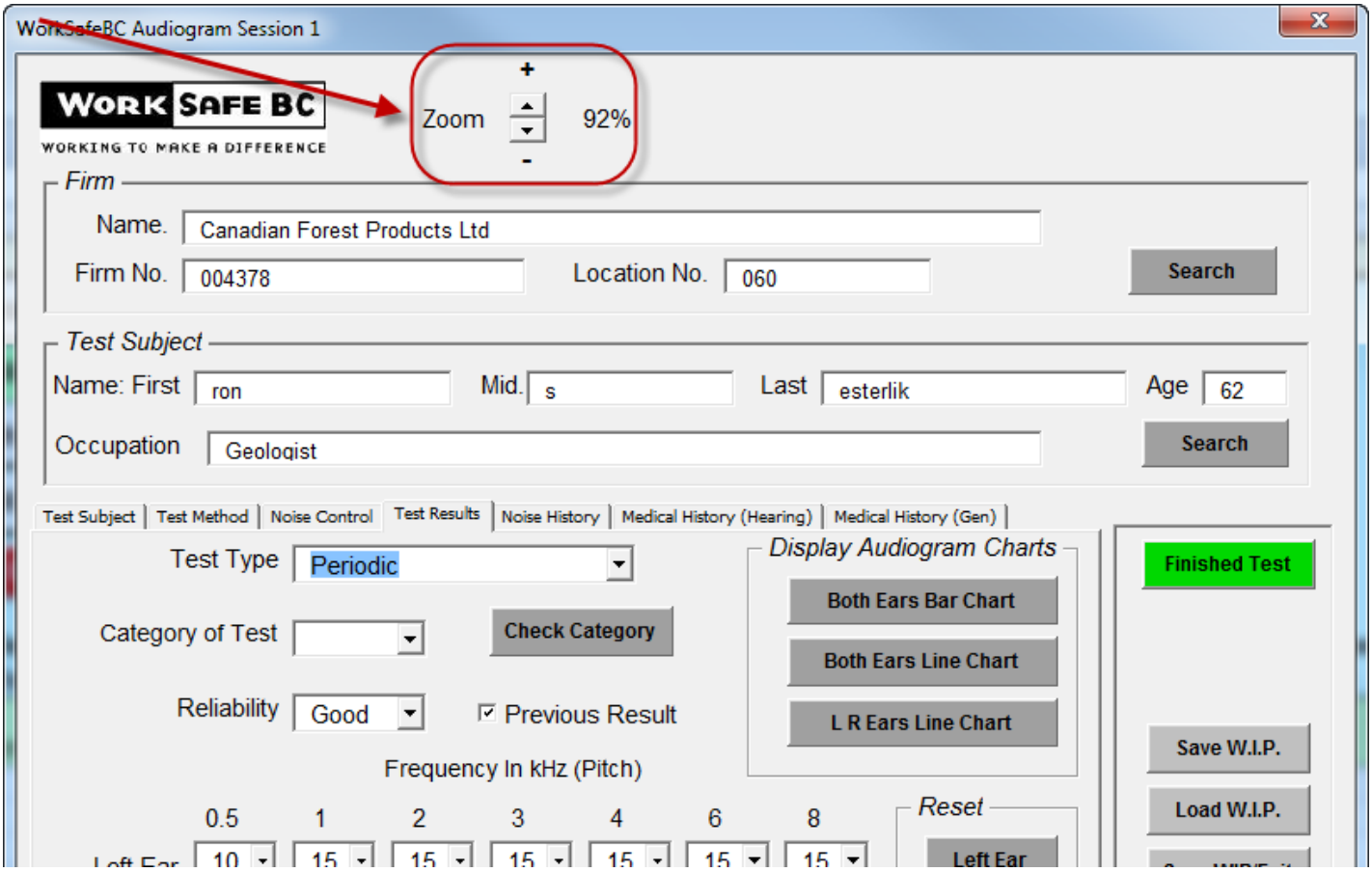
Switching To Data Entry Mode

The ‘Data Entry Mode’ button will close the audiogram form and populate row 3 of the ‘Audiogram Data Entry’ tab with all the data entered in the audiogram form up to that point.



Changing Audiogram Form Window Size

The 'Zoom' button at the top of the audiogram form allows you to increase or decrease the size of the audiogram form window. This is mainly for laptop users with small screens.



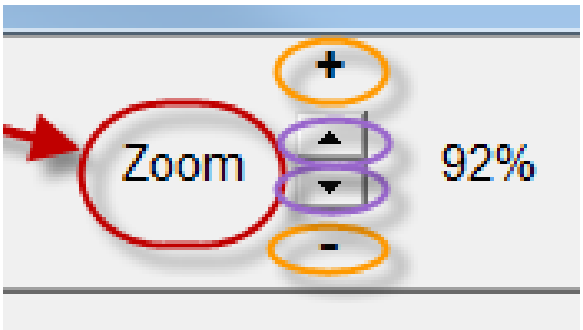
Each click on the **"+"** will increase the window size **by 5%.**

Each click on the **up arrow** will increase the window size **by 1%.**

Each click on the **down arrow** will decrease the window size **by 1%.**

Each click on the **"-"** will decrease the window size **by 5%.**

Clicking on the **'Zoom'** will reset the window size back **to 100%.**



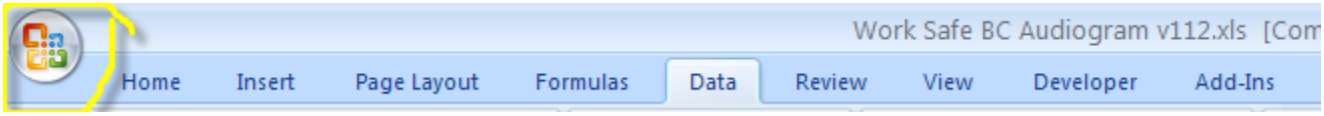
Saving Changes in the Audiogram Program

You should save the changes you have made to the audiogram program from time to time.

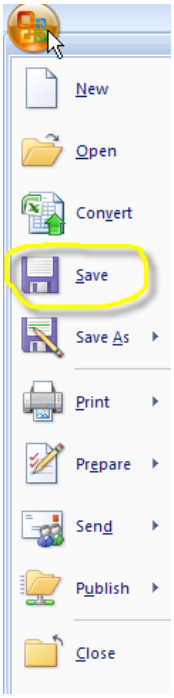
The 'Save Row 3' button in the 'Audiogram Data Entry' tab only saves the hearing test you have entered in row 3 to an empty row after row 3. It DOES NOT SAVE THE EXCEL WORKBOOK that contains your audiogram program.

Follow these steps to save the Excel workbook that contains the audiogram program.

Click the 'Office' button at the top left corner of the Excel window.



Click the 'Save' option to save the Excel workbook that contains the audiogram program.



Tip: you can also press CNTL-S to save.

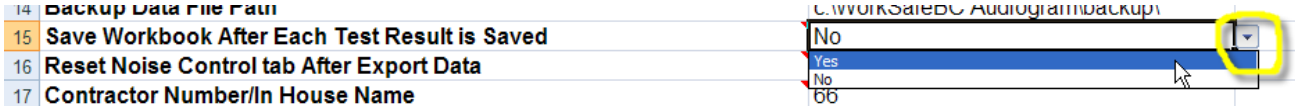
Setting a full spreadsheet Save at each Audiogram Save

If you are new in using Microsoft Excel, you can setup the parameter in the 'Parameters' tab so the Excel workbook that contains the audiogram program is saved each time you save a hearing test in the 'Audiogram Data Entry' tab.

The 'Save Workbook after Each Test Result is Saved' parameter is set to 'No' by default.

Click the dropdown button on the right hand side and select 'Yes' from the dropdown list.

	A	B
1	**Session**	1
2	**WorkSafeBC Audiogram File Path**	c:\WorkSafeBC Audiogram\output\
3	**WorkSafeBC Audiogram File Name**	Audiogram
4	**Archived Data Unload File Path**	c:\WorkSafeBC Audiogram\archive\
5	**Archived Data Unload File Name**	Audiogram
6	**Audiogram Window Zoom %**	110
7	**Data Entry Validation**	Yes
8	**Reset Noise History tab After Export Data**	Yes
9	**Reset Medical History (Hearing) tab After Export Data**	Yes
10	**Reset Medical History (Gen) tab After Export Data**	Yes
11	**Audiogram Chart Zoom %**	90
12	**Construction Industry Firms**	Yes
13	**Medical History Reminder For Type Types of 'Baseline' and '1st Time In Noisy Industry'**	Yes
14	**Backup Data File Path**	c:\WorkSafeBC Audiogram\backup\
15	**Save Workbook After Each Test Result is Saved**	No
16	**Reset Noise Control tab After Export Data**	No
17	**Contractor Number/In House Name**	66
18		



14 Backup Data File Path
15 Save Workbook After Each Test Result is Saved
Yes
No
16 Reset Noise Control tab After Export Data

Now the Excel workbook that contains the audiogram program will be saved each time you click the 'Save' button to save a hearing test in the 'Audiogram Data Entry' tab.